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PREHISTORY OF ORISSA

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Palaeolithic Age

SO far as Orissa is concerned, we find that this state like many other states of India was inhabited by prehistoric men who lived, flourished and died in this land and left behind their non-perishable artefacts of stone. No fossilized human remains of equal antiquity have been discovered so far. Coming to the different stages of the Stone Age cultures of Orissa, one by one, we find that the Lower Palaeolithic is well represented in the State. The occurrence of palaeolithic types of implements in Orissa was first reported by V. Ball[1] in the year 1876 (Ball 1876 : 122 ff.). The implements were four in number and were collected on the surface from Angul, Talcher, Dhenkanal and Sambalpur. All of them are of quartzite and each was prepared by removing flakes from the core by means of hard blows. Two of these implements, one from Dhenkanal and the other from Angul, are in the Indian Museum, Calcutta. J. Coggin Brown[2] has described them as 'boucher' and 'palaeolith' respectively. But according to modern terminology all are hand-axes or bifaces of different types. The specimen from Angul is of the 'ovate' type, those from Talcher and Dhenkanal are 'ovaloids' while that from Sambalpur is a 'peariform' hand-axe.

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After Ball's discovery, more than sixty years passed during which no further discovery was made in Orissa, although implements of neolithic type had already been reported from the same state by P. Acharya, Archaeologist of the then princely state of Mayurbhanj (*Annual Report of the Archaeological Survey of India*, 1923-24 : 100 and 101). After Ball, the occurrence of palaeoliths in Orissa was reported by Eugene C. Worman (Jr.), a Research Fellow of the Harvard University, when he visited several places in Mayurbhanj with Acharya early in the year 1939. The suggestion to visit Mayurbhanj had been made to Worman by two lecturers of the Calcutta University when he came to visit the Department of Anthropology, Calcutta University, in connection with his own researches on the neolithic culture of India.

Systematic work in Mayurbhanj was undertakn by the Calcutta University when two members of the staff, N. K. Bose and D. Sen, visited the village of Kuliana in Mayurbhanj in the month of April, 1939. The palaeolithic site in the village of Kuliana (22°4′N, 86°39′E) was first located by Worman and Acharya. Work was carried out from December 1939 to January 1942, when a small-scale excavation was also undertaken. As a result, more palaeolithic sites in the neighbourhood of Kuliana were discovered yielding more than 600 artefacts. The results were published by the University of Calcutta under the joint authorship of N. K. Bose and D. Sen[3] in 1948.

The major conclusions arrived at were as follows :

'(i) The industry of Kuliana is mainly a core-industry with an important addition of pebbles and a small admixture of flakes with high flaking angles and unprepared or unifacetted striking platforms.

'(ii) Hand-axes and choppers predominate and, in the former class, ovate and oblong types are more numerous than almond forms showing better flaking technique.....'

Further, it was remarked 'the Kuliana industry naturally shows a certain amount of agreement with industries from other parts of India, as well as of Africa'

As no fossils were recovered from the detrital laterite in which the Kuliana industry is lodged, the exact age of the bed could not be determined on palaeontological grounds. But it was suggested that further work should be carried out in the nearby river-section to correlate the boulder conglomerate bed lying below the Kuliana detrital laterite with a similar bed in a section on the bank of the river close by, in the hope of discovering fossils and artefacts from the latter where the conditions are better for the preservation of fossils.

For various reasons, no further work could be carried out in Mayurbhanj till 1948. In that year D. Sen and G. S. Ray of the Department of Anthropology, Calcutta University, further extended the number of palaeolithic sites far beyond Kuliana, and since then a further collection of about 500 tools have been made from the same area. Later on Bose, Sen and Ray[4] carried out more intensive work in the river valley near Kuliana when they thought they had come across evidence of past climatic oscillations. In-situ tools were also discovered in the boulder conglomerate bed on the bank of the river.

Further work was carried in the river bank in 1952, 1955 and 1957, the results of which were briefly published in *Man in India*, 38, 1, in 1958.[5] The conclusion was provisionally stated thus : the extension of the Kuliana sequence of palaeolithic implements has been well established in the boulder conglomerate bed near Kamarpal, lying 3 miles from Kuliana, where there is an earlier tool phase at the base. The age of the Baripada fossiliferous bed was moreover stated to be Lower Pleistocene instead of Lower Miocene.

Excepting the work referred to above, no other systematic work has been undertaken in any part of Orissa, though a few stray finds have been reported from several places from time to time. Thus, for instance, *Indian Archaeology, 1958-59 : A Review*,[6] published by the Department of Archaeology, Government of India (1959) records the discovery of 'a quartzite bifacial hand-axe on pebble at Harichandanpur (in Talcher), a site already known for a few palaeoliths by Shrimati D. Mitra. There is also a report of a discovery of

tools belonging to Series I and Series II from Keonjhar and Mayurbhanj by Shri S. C. Mahapatra (pp 36-7).

In the light, however, of our present day knowledge about the distribution of Lower Palaeolithic cultures of Peninsular India, we find that Madras and Mayurbhanj industries, along with those of Manbhum and Singhbhum in Bihar, form an integral part of one of the three main lithic traditions of India, namely, 'a biface core-tool tradition broadly similar in form and techniques to the Abbevillian-Acheulian of Europe and Africa,' in association with a second one namely 'a pebble-tool tradition, broadly similar in form and technique to the Kafuan-Oldowan of Africa.' The third one formed by 'a flake tradition coupled with pebble-tools broadly similar to the Anyathian of Burma and Choukontienen of China' has been found in the Soan Valley, West Pakistan, and not in Peninsular India. These were pointed out by D. Sen[7] and he has further shown that according to some authorities 'the early centre of the core-tool tradition lies in Peninsular India and Africa, extending into Atlantic Europe and Western Asia'. There is also a Northern flake-tool tradition whose early seats 'comprise Eastern Europe, the Near East, Central Asia, Northern India and Northern China'—the cradle being the Central Eurasian belt. But he has also pointed out that there is another school of thought which thinks that India is the meeting place of two Lower Palaeolithic culture-complexes, namely, a Western biface hand-axe and an Eastern complex of 'chopper-chopping' tools, free of biface. Pebble scrapers and pebble choppers comprise the chopper-chopping tool series. As the Lower Palaeolithic industry of Peninsular India, including that of Orissa is essentially a biface hand-axe complex, so according to the above view, it is more closely related to the Western complex.

Thus we find that at present nothing can be said definitely about the age of the Lower Palaeolithic culture of Orissa on the basis of purely stratigraphic or palaeontological evidence. But typologically this culture has been correlated with the Pre-Soan culture of the Soan Valley, West Pakistan, which in turn has been tentatively assigned to the Second Glaciation of the Kashmir Himalaya by H. de Terra and T. T. Paterson.[8] If

this view is accepted, then the Lower Palaeolithic culture of Orissa can be considered to belong to the Middle Pleistocene period.

Neolithic Age

So far, no industry has come to light from Orissa which can be equated either typologically or in point of time with the successive stages of the Middle and Upper Palaeolithic or Mesolithic cultures of Europe. But Orissa abounds in neolithic types of stone implements. These are in the main various types of stone axes and adzes known as celts, made by various techniques of chipping, chipping and grinding or polishing.

In the year 1923-24, attention was first drawn to the occurrence of celts in Mayurbhanj, Orissa, by P. Acharaya from his native village named Baidipur (21°46′22″ N, 86°41′54″E), when he showed his collection to Ramaprasad Chanda of the Archaeological Survey of India. A small collection of these celts was presented by Acharya to the Indian Museum, Calcutta, and this was referred to in the *Annual Report* of the Archaeological Survey of India as mentioned earlier. Later on, R. D. Banerji visited three celt sites in Mayurbhanj along with Acharya of the Archaeology Department of the said princely state. Beside Baidipur, the two other sites are one at Khiching (21°55′N, 85°50′ E) and the other on the Manada-Jashipur road. Banerji[9] in his book, *History of Orissa*, has given a comprehensive account of these localities and the implements collected there. It is important to note that besides celts of various types, the Baidipur industry contains a shouldered adze and also a very corase kind of pottery. A large collection of celts including a few shouldered celts from Mayurbhanj is at present housed in the museum at Baripada, the headquarters of the same district.

After Acharya, a few celts were reported by N. K. Bose[10] from Kuliana, in 1940. In 1952, Y. D. Sharma[11] of the Archaeological Survey of India reported the occurrence of four celts of the chisel type in an iron ore quarry at Thakurani, Keonjhar District, Orissa. From Sharma's paper, we get the reference of two more chisels from Sitabhanja in the same

district. At the annual session of the Indian Science Congress at Baroda in 1955, N. Datta-Majumdar[12] reported the occurrence of celts in the Sundargarh District of Orissa. Six celts were collected by him in the years 1951-52 from the valley of the two rivers, Ib and Brahmani. Among the celt collection of the Department of Anthropology, Calcutta University, there are three polished shouldered celts from unknown localities in Orissa. Two of them came probably from Sishupalgarh in Bhubaneswar. As in the majority of cases in India, all the celts of Orissa were collected from the surface, devoid of any stratigraphical context. It is, therefore, very difficult to date these industries and to say whether Orissa passed through a neolithic stage represented by a self-sufficient food-producing economy, characterized by the presence of domesticated plants and animals together with smooth stone implements and pottery.

But some light on these industries has been thrown by Eugene C. Worman (Jr.)[13] in his paper on 'The Neolithic problem in the prehistory of India'. In the absence of any stratigraphical evidence, Worman classified celts from all over India into twelve basic types forming three groups based on two main techniques. On the basis of their geographical distribution, he also tried to find out their relative age. The important features revealed by his study are :

(i) In India smooth stone celts have been found to occur almost exclusively in Bengal, Assam and in eastern, central and southern India, south of the flood-plain of the river Ganges, north of Pudukkottai in Madras State and east of a line in a south-southwesterly direction from Lucknow in Uttar Pradesh to Goa on the south-west coast.

(ii) Beginning from the celts of Group I each succeeding group of celts is technically more developed than the earlier one and at the same time limited in its distribution towards eastern India wherefrom all the 12 basic celt types have been found.

(iii) On the basis of distribution it seems that the celts of the Group I comprise the oldest and the most basic of all types in India. While the celts and techniques of manufacture of

Group II and Group III were introduced into India from the east in two successive periods.

If Worman's contentions are right, then Orissa, being a part of eastern India where all basic types have been discovered, must have been influenced by the above three culture groups one after another.

On the basis of historically datable archaeological objects found from the cultures where stone celts were used along with metal implements, Worman further suggests that, the earliest Neolithic-like stone tools probably appeared in India not earlier than 3500 or 2500 B. C. while celt types of Group III were first made in India around 1500 B. C. But their spread west-ward was 'supplanted by metal implements brought into the Ganges river basin by the Indo-Aryan immigrant from the west at approximately 1000 B. C.'

Thus, according to Worman, neither the celts of Orissa nor those of any other part of India are truely neolithic in their context. And he concludes 'In India itself there is no positive archaeological proof for the existence of Neolithic peoples at any time before or after the use of metal was introduced into that country'.

However attractive these conclusions may be, they have to be examined in the light of further detailed archaeological investigation. V. D. Krishnaswami[14] has already critically commented upon the views of Worman. *Indian Archaeology 1958-59* has recently reported the discovery of more celts as well as of microliths in Dhenkanal, Keonjhar and Mayurbhanj by D. Mitra, S. Ghosh, D. K. Chakravarty and S. C. Mahapatra (pp. 36-37).

Metal Ages

It is very difficult to prove if Orissa actually passed through a proper phase of the Metal Age. Though a number of copper implements have been discovered in different places in Orissa, it is not possible to determine their antiquity ; in fact, many of them seem to belong to historical periods. Of the few finds, the implements recovered from the village of Bhagra Pir on the banks of the river Gulpha in Mayurbhanj deserve special

mention. Each is with a semicircular cutting edge and with a semicircular projection on the top connected to the body by a narrow neck. The largest specimen is 18½" in length and 15¾" in breadth. According to C. T. Trechmana they are very thin as reported in the *Journal of the Bihar and Orissa Research Society*, Vol. II, 1916, pp. 386-7.

At present it is not known with certainty whether a true megalithic culture associated with the erection of various types of stone monuments on sepulchres containing iron implements of some antiquity occurs in Orissa as in South India.[15] But the aboriginal tribes of Orissa, namely, the Gonds and the Gadabas,[16] are said to have a living megalithic culture along with some other tribes of Assam, Chotanagpur and Bastar. The monuments connected with these tribes are mainly commemorative in nature rather than connected with graves. Some authorities think that the megalithic culture of South India, belonging to the Iron Age, is free in its development from the megalithic culture of north-eastern India. An overlapping of these two independent cultures has taken place along the line of the Godavari.[17]

S. S. Sarkar, Lecturer, Department of Anthropology Calcutta University, while working among the aboriginal tribes of Keonjhar, Orissa, in connection with certain problems in Physical Anthropology during the months of February-March 1956, has informed that, 'a small group of menhirs and dolmens (two megalithic types) can be seen in the village of Sirsipal about 2 miles from Keonjhar town. There are about 20 Santal and about 8 Munda families in the village. The Mundas associate the megaliths with their ancestors of very remote time.' Excavation of these megaliths, as well as megaliths of some antiquity, in this State are likely to throw some light on the meglithic problems of eastern India.

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ON THE OCCURRENCE OF PALAEOLITHS IN SINGHBHUM

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SINGHBHUM district in southern Bihar is well known for its prehistoric antiquities. The first report of the occurrence of stone tools (chert flakes and knives) from Chaibasa and Chakradharpur was due to Captain Beeching (P. A. S. B. 1868). Later on in 1874 V. Ball brought to light some more data from different parts of the Singbhum district (P. A. S. B. 1875). In 1938, Prof. W. G. Fearnsides* collected a small biface from a loess deposit near Hat Gamharia. A plaster-cast copy of the specimen is in the Anthropology Department of Calcutta University. Besides these pioneers, Dr. P. Mitra, Mr. C. W. Anderson, D. Sen and others collected more stone tools from various sites in the Singhbhum district. The present paper deals with the occurrence of palaeolithic implements in Chaibasa and its neighbourhood.

The district of Singhbhum is situated between 21°58′ and 23°36′ N. lat. and 86°54′ E. long. and it forms the south-eastern portion of the Chotanagpur division of Bihar. Its mean elevation above sea level is 575 ft., the highest 750 ft. is round the Chaibasa Railway Station and the lowest 400 ft. is near the Subarnarekha river. The country is mainly drained by three rivers, the Subarnarekha, the Baitarani and the Brahmani. Among these the Subarnarekha is the longest having a course of 80 miles from north to south-east. Its chief affluents

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*Prof. W. G. Fearnsides F. R. S. of the Geology Dept. of Sheffield University gave this information to D. Sen during the 1948 Session of the Indian Science Congress.

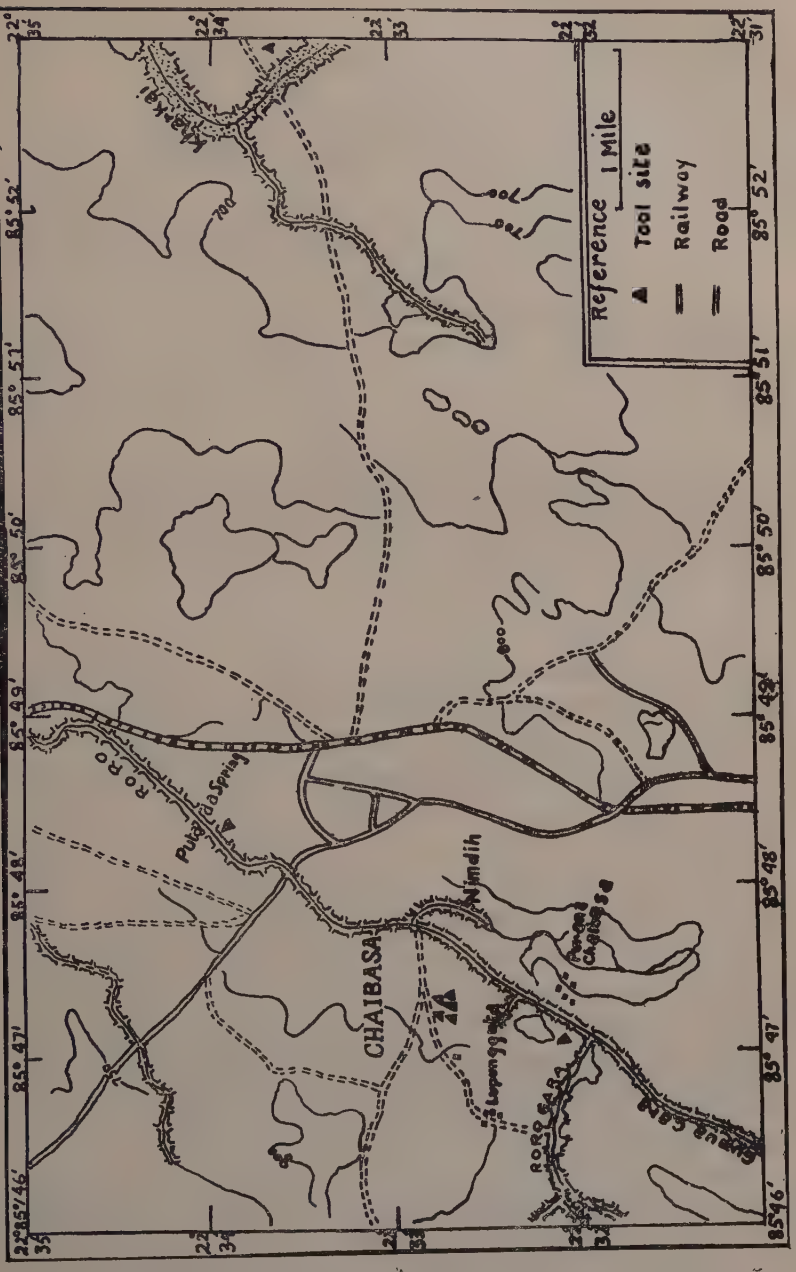

Fig. 1 Map of Chaibasa and its neighbourhood.

are the Kharkai and the Sanjai. The length of the Kharkai proper is 50 miles ; it is fed by several streams from the Kolhan, among which the Iligara, the Gamuagara and the Roro may be mentioned. A number of tools has been found in the upper gravel surface near the river Roro, which flows west of Chaibasa town. The Roro is joined by the Gamuagara just outside Chaibasa proper.

Geologically, Singhbhum is the most interesting district of Bihar. It was subjected to the influence of sub-aerial denudation and erosion since the deposition of Vindhyan and Gondwana beds. Barring the older metamorphic and crystalline rocks, the other formations occurring here are formed pleistocene and recent deposits, including laterite. The older geological formations are as follows :

(1) Highly metamorphosed Singbhum granite and gneiss of Archaean Age.
(2) Highly metamorphosed Iron Ore Series.
(3) Dalma volcanic flows.

Besides the above, there are some superficial deposits. The calcareous accretions called *kankar* occur abundantly in the alluvium of the river at Chaibasa. Laterite is found both at high and low levels, and towards the east, it gradually covers up the older rocks. A pebble conglomerate bed, which varies in thickness, is found sporadically in masses on the bank of the Roro.

The laterite is, however, widely spread over rocks of the Iron Ore Series. The laterite cap on the steatite bed found on the bank of the Roro is of local formation, due to capillary action as in dry weather the surface water is dried up and the water comes from the lower ferruginous level. The deposition of such laterite is, however, irregular at Chaibasa. The deposition of laterite is thick in places, but generally it thins down as one moves away from the Roro.

The site where the tools occur is located on a high gravel surface in the Roro valley. It yielded a large number of specimens. The tool-making materials here are mainly quartzite and jasper which occur in the Roro valley in the form of pebbles.

The river Roro which is 36 miles long flows south-west to north-east. The Roro valley was explored for cliff sections and tools for nearly 5 miles, from the junctiou of the Rorogaro to a point where the river flows below the railway line, forming a zigzag course. A survey of the valley brought to light three terrace-like formation at 60 ft., 40 ft. and 20 ft. respectively from the river level. But they are local formations, about which Dr. Dunn (M. G. S. I. Vol. LXIII) held the following view.

'Recent river wash occurs throughout this area, but is normally sufficiently impersistent. The recent wash assumes a considerable thickness and merges into wide plains which flank the river. It becomes rather arbitrary deciding the point at which places the alluvium is, although the river banks form cliffs of alluvium, very high outcrops of underlying rocks may be continuous in the river which eroded the alluvium. Along the lower reaches of the river beyond the southern border, there are two terraces of alluvium. In places there are indications of a third terrace. The edge of the terrace is surely eroded and has formed a typical bad land type of country.

'The upper terrace extends to form a wide flat alluvium plain which is generally sharply marked off from the undulating country of the older gravels of Tertiary Age. In places, however, a wash from the latter may tend to obscure the boundary. The alluvium of recent period reaches here where the river is just emerging on the central plain. It provides a further indication of the very recent uplift in this area and the uplift which has been more or less continuous through Tertiary times, and which other evidence also indicates, persists to-day.'

This is more or less a general statement on terrace formation on this area. The left bank of the Roro near Tilimdah shows three alluvial terraces, which are probably due to local uplift of the land. Of the three terraces the highest which is implementiferous is situated at 60 ft. above the river bed, and is here designated as the upper terrace. This surface is gravelled and at places it is covered by a thin layer of yellow soil and an underlying layer of *murum*. The middle terrace is

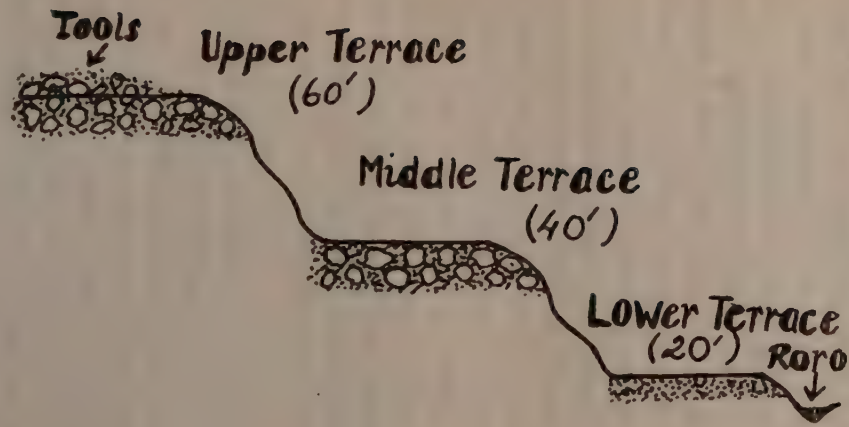

Fig. II Terrace section at Tilimdah

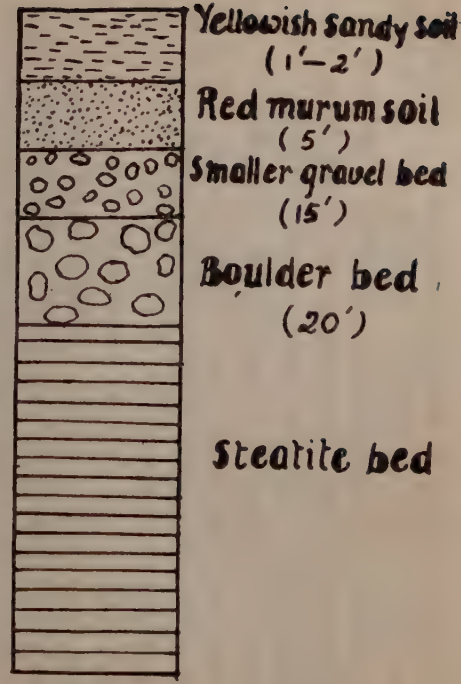

Fig. III Stratigraphic succession exposed in the Lupunggutu quarry at Chaibasa.

represented by a large flat land, the height of which is 40 ft. above the river bed and it also contains a thin spread of gravels. The lower terrace is the recent alluvial bank, it is narrower and lower, the height being 20 ft. above the river bed (Fig. II).

The tools were mainly found in the upper gravalled surface. Some of the tools were probably exposed by washing away of the top soils. A few tools were also collected from the middle and lower terraces. Such tools are rolled and weathered.

A few quarries have been made at Chaibasa which reveal interesting stratigraphy. One of the quarries, the Lupunggutu quarry, has been noted here.

This quarry has been made by the 'Lupunggutu Talc Schist Co.' for quarrying talc. It is about a furlong south-west of Tilimdah and is very near to our tool-site. It is exposed upto a depth of 70 ft. The topmost layer consists of yellow soil 1-2 ft. in thickness. Just below it there are three successive layers of red *murum* soil, a thin gravel bed and a thick boulder bed respectively.

The red lateritic *murum* forms the matrix in all these three layers. The total thickness of these three layers is 40 ft. The lateritic matrix appears to be a local formation due to capillary action. It is not found over a wide area, but is irregular in distribution. The gravels and boulders are mostly of quartzite with lateritic incrustation. Lumps of quartzite and jasper also occur. No tools, however, have been found in these layers. The boulders and gravels are water-worn. Below these layers there is a thick steatite bed at the bottom of the quarry. The age of the steatite bed is still undetermined (Fig. III).

A large number of stone tools of different types have been collected from Chaibasa and its neighbourhood. The specimens may be broadly grouped as (*a*) pebble tools, (*b*) core tools and (*c*) flake tools.

(*a*) **Pebble tools** : The term is used in a literal sense, for any tool made on pebble showing a large pebble cortex. There is only one such tool in our collection, *viz.* a hand-axe made on

a roughly oval pebble. Flakes have been taken out from both dorsal and ventral surfaces in an irregular fashion resulting in a pointed end. In one of the specimens, flakings are confined to the peripheral region only and there is the original pebbly cortical surface at the butt end. As it resembles hand-axe in form and technique, it may provisionally be described as 'hand-axe on pebble.' Typologically it recalls the early Abbevellian type. (Fig. IV, 1)

(*b*) **Core tools** : These are prepared from lumps of jasper and quartzite, on which blows are dealt at suitable points and in multiple directions for the fashioning of a definite form. Core tools are grouped as follows :

(*i*) Bifacial chopping tool : This is made on core, round in shape, flaked on both dorsal and ventral surfaces at the peripheral region as a result of which an all-round cutting edge has been formed. Moreover, it is flaked in such a way that the flaking on the dorsal surface alternates with those of the ventral surface and the cutting edge so formed is very irregular and jagged. Some secondary flakings are found at the cutting edge, which make it more sharp (Fig. IV, 2).

(*ii*) Hand-axe : It is the typical core tool, the dorsal and ventral surfaces being flaked all over in multiple directions. At one end there is the pointed working end while the opposite end is round and blunt serving the purpose of butt. Hand-axes form the largest tool family in our collection. The hand-axe is further typologically classified on the basis of form and technique as

(1) Abbevellian type of hand-axe : Made on core, heavy and massive, asymmetrical in shape, presence of original cortical surface near the butt end. The primary flakings are large and secondary flakings are absent (Fig. IV, 3, 4).

(2) Acheulian type of hand-axe : Smaller in size, less massive and less heavy than the Abbevellian type. There is symmetry in form and the workmanship is better. The working end is pointed, the profile shows S-twist and the butt-end is continuous with the line of profile. Secondary flakings are concentrated near the marginal end. There is a variation

of shape from peariform to oval. This type forms the largest number in the collection (Fig. IV, 5, 6).

(*iii*) Cleavers on core : It is a variety of the axe, where the cutting edge is transverse to the long axis. It is U-shaped in form with slight variations in the lateral margins. The broad cutting edge is formed by the intersection of two large flake scars, inclined to one another at a small angle. The butt end is thick and the cross section is parallelogram (Fig. IV, 7).

(*c*) **Flake tools** : They are grouped as follows :

(*i*) Chopper : Made on flake with unfaceted striking platform and prominent bulb of percussion. The working edge was prepared by flaking on the dorsal surface at the peripherial region. Presence of minute traces of secondary working near the working end. The ventral surface is unworked. The working end is zigzag (Fig. IV, 8).

(*ii*) Scraper : Made on flake. The sharp cutting edge is formed by the intersection of main flake surface. The shape varies from oblong to round type (Fig. IV, 9, 10).

Correlation

The tools are mainly on core, being of various shapes and sizes and also varying from cruder to finer and evolved types. They are of the Abbevellio-Acheulian typological series, consisting of freely flaked peariform types and long ovates with round butt end. The Acheulian tools exhibit controlled and stepped flakings.

The total number of tools collected is 35 out of which 25 are hand-axes on core *i.e.*, 71.4% of the total. The other types of artifacts on core are choppers and cleavers. Out of a total collection of 35 specimens, core tools are 29 in number (82.8%).

The only chopping tool in our collection is on core ; it is partly bifacial. The cleavers have straight or oblique cutting edges with rounded butt and parallelogram cross-section, recalling the Vaal technique and closely resembling the Madrasian cleaver. Only one hand-axe made on pebble has been found, which is of the most crude type.

Flake tools are very few in number, resembling the Clactonian technique. The types of flake tools are chopper and scraper. The flake tools are 5 in number (14.3%).

The tools generally show a close agreement with those from Mayurbhanj and Manbhum, the adjacent districts of Singhbhum, so far as types and techniques are concerned. But regarding the materials employed for tool-making there is a difference. This is the first time that large core tools like hand-axes and cleavers made on jasper have been found in eastern India. Small flake or blade tools on jasper, flint, chert, chalcedony etc. occur in Narmada region ; they are small blades and scrapers analogous with the Upper Palaeolithic or Mesolithic industries. Some more blade tools on jasper have been reported from central and western India.

The different materials employed for tool-making in Chaibasa and their relative proportions are given below :

	Quartz	Quartzite	Jasper	Sandstone	Chert	Basalt	Total
Chopper and Chopping Tools	×	2	×	×	×	×	2
Hand-axes	1	6	17	2	×	×	26
Cleavers	×	×	3	×	×	×	3
Scrapers	×	×	1	×	2	1	4
Total	1	8	21	2	2	1	35

The above table reveals the frequency of jasper tools over those of quartzite and others. Out of 35 tools, 21 (60%) are made on jasper, the remaining 14 (40%) are formed of other materials.

On the other hand, in the adjacent districts of Manbhum and Mayurbhanj, as well as in other parts of Bihar and Orissa and U. P., jasper tools are conspicuous by their absence. Though quartzite occurs around Chaibasa, tools made on quartzite are not frequent as the table shows (28.5%), whereas jasper tools predominate in our tool series (51.5%). This may be due to the following factors. Quartzite is a metamorphic rock which is

formed from sandstone. Sand is usually made up mostly of small grains of quartz, and consolidated sands provide the important sedimentary rock, sandstone. The composition of quartz is silicon dioxide. Jasper is a variety of cryptocrystalline silica and is one of the forms of chalcedonic silica, the composition of which is a mixture of crystalline silica and amorphous hydrated silica. It is an impure opaque form of cryptocrystalline silica with brown colour, specimens being beautifully banded. As it is colloidal and cryptocrystalline it leads to a more easy flaking technique than a comparatively coarse grained hard refractory rock like quartzite. Jasper tools show more deep, conchoidal and symmetrical flake scars than quartzite tools of the area. The beautiful colour of jasper is also an attractive feature.

Another important factor is the abundance of jasper in Chaibasa in the form of lumps and pebbles. There is an outcrop of jasper at Jagannathpur, 15 miles south-west of Chaibasa, near the Deo river. The surrounding area of Jagannathpur, upto Jamda is known for its jasper.

Here it may be noted that the jasper used for tool-making was also probably transported by early man from the original source. The secondary source (*e.g.* jasper pebbles) are likely to have been exposed to extreme changes of temperature which often render it brittle and very hard to work. Unless more data are found, nothing definitely can be said at present regarding the choice of jasper.

Chronology

The main tool site occurs on a high gravelled surface on the Roro near Chaibasa town. The gravels here are not unlike those in the adjacent section of Lupunggutu quarry. It appears that the Lupunggutu gravel bed merges with the gravelled surface of the site where tools are found. The matrix of the gravels and boulders is ferruginous. The boulder bed overlies the steatite bed of unknown age. If the Lupunggutu gravel section can be dated and if it is correlated with the gravel surface of the tool site, then some light on its chronology is expected.

Typologically the tools recall the Abbevellio-Acheulian and resemble the Madrasian core tool industry with emphasis on the hand-axe.

Possibilities of Further Work

The present survey is just a beginning. Much remains to be done for a clear-cut picture of the environment and lithic industry of the region as well as its chronological position. The tools appear to be exposed on the surface by sub-aerial erosion and it is probable that some more tools may be found in-situ if trial excavations are made. Some stratigraphical data may be obtained as there is a sort of correlation between the upper level of the Lupunggutu quarry and the high terrace level where tools are found. A systematic survey of the Roro valley should also yield more artifactual data.

Besides the Roro, a brief preliminary survey of two other rivers, the Kharkai and the Karo, situated in east-north, east and south-west of Chaibasa respectively, has been undertaken. It is hoped that a careful examination of these valleys will yield further data. The Karo valley near Jamda containing huge jasper lumps, lateritic caves and high cliff sections should be first explored.

A brief typological description of selected specimens is given below :

(1) Specimen No. CHB 20/59. Material—Sandstone. Somewhat weathered and patinated. Highly flaked on both surfaces, except the large pebbly butt-end, the flake scars are large and deep. No secondary working ; working end is pointed. Type—Hand-axe on pebble (Fig. IV. 1).

(2) Specimen No. CHB 19/59. Material—Quartzite. Highly patinated flaked on both surfaces, the flake scars are large and deep. Flake scars on the dorsal surface alternates with the ventral surface to form the jagged cutting edge. Presence of original cortexed surface Minute secondary workings are at the cutting edge. Type—Bifacial chopping tool on core (Fig. IV. 2).

(3) Specimen No. CHB 21/59. Material—Sandstone, Rolled and patinated. Large and irregular flake scars are present on both dorsal and ventral surfaces. Working edge is not so pointed. Presence of a trace of secondary working. Type—Hand-axe on core (Fig. IV. 3).

(4) Specimen No. CHB 6/59. Material—Quartzite. Large and flat dorsal surface with large number of flake scars than the ventral surface. Presence of original cortexed at the butt end. Presence of secondary working at the marginal end. Type—Hand-axe on core (Fig. IV. 4).

(5) Specimen No. CHB 10/59. Material—Jasper. Both dorsal and ventral surfaces are provided with small regular and deep flake scars. Secondary working present at the marginal end. Type—Hand-axe on core (Fig. IV. 5).

(6) Specimen No. CHB 18/59. Material—Jasper. Mostly rolled and patinated. Deep and large primary flake scars are present on both the surfaces, no secondary flaking. Type—Hand-axe on core (Fig. IV. 6).

(7) Specimen No. CHB 12/59. Material—Jasper. Considerably weathered. Primary flake scars present on both dorsal and ventral surfaces and they intersect at the cutting edge. Secondary working present at the marginal end. Type—Cleaver on core (Fig. IV. 7).

(8) Specimen No. CHB 8/59. Material—Quartzite. Somewhat rolled and patinated. Made on flake with prominent bulb of percussion and unfacted striking platform, wide-angled, recalling clactonian technique. Presence of large flake scars on the dorsol surface, secondary working present at the cutting edge which is convex. Type—Unifacial chopper on flake (Fig. IV. 8).

(9) Specimen No. CHB 31/59. Material—Chert. Somewhat patinated. Made on flake when the ventral surface is the main flake surface, dorsal surface is provided with a number of secondary working. Type—Scraper on flake (Fig. IV. 9).

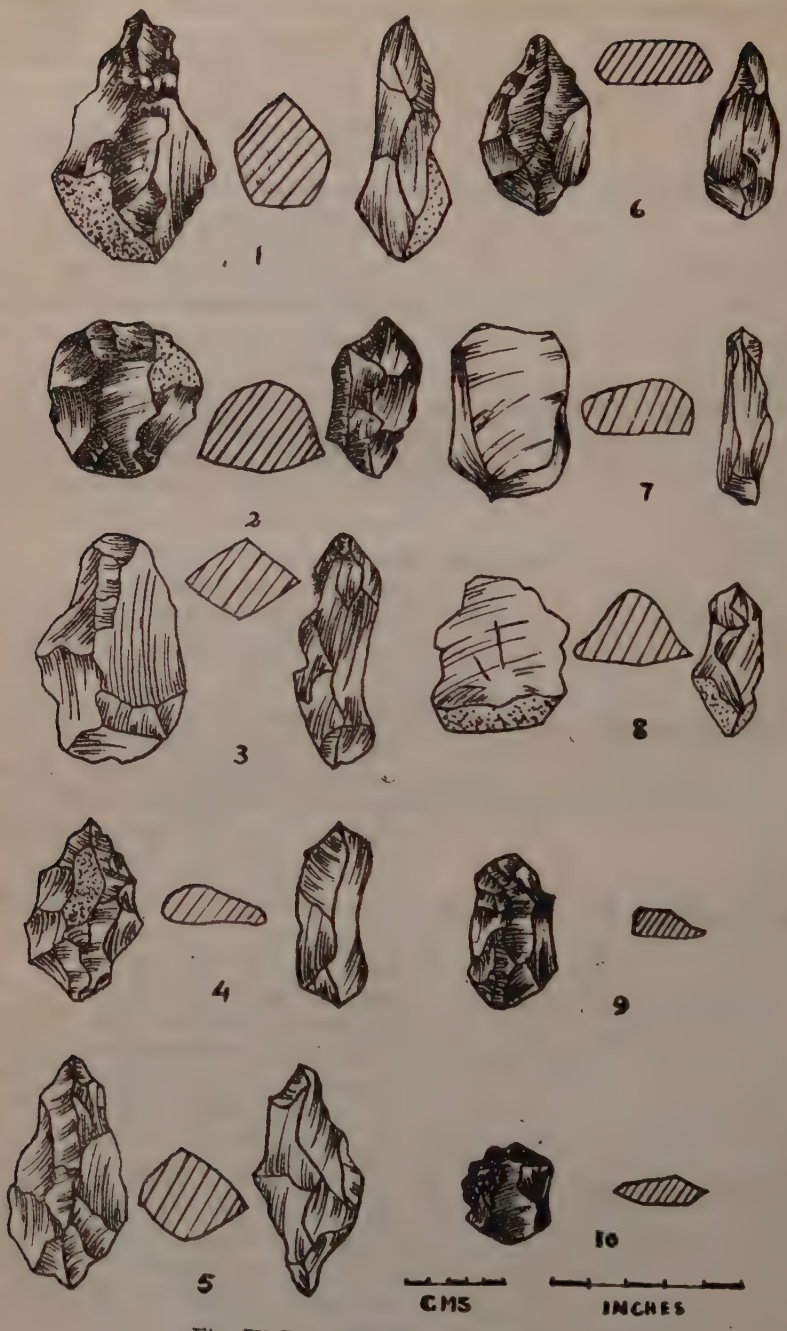

Fig. IV Palaeoliths from Chaibasa

(10) Specimen No. CHB 32/59. Material—Basalt. It is made on flake with its ventral surface as the main flake surface. Secondary working present on the dorsal around the marginal end. Type—Scraper on flake (Fig. IV. 10).

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ECONOMIC DEVELOPMENT AND PEASANT MARRIAGE IN SOUTH INDIA

SCARLETT EPSTEIN

SINCE the last war the impact of economic development on peoples living in 'backward' areas has increasingly attracted the attention of cultural and social anthropologists. More and more studies of social change resulting from economic development are being made. But few studies attempt a comparison between the social changes resulting from different types of economic development. In this paper I set out to discuss the impact of different kinds of economic development on the marriage procedure and expenditure of Peasants[1] (*Okkaligas*) living in two Mysore villages in South India[2].

Economic Development of Wangala and Dalena[3]

Wangala and Dalena belong to the same culture area ; they are situated in the same *hobli* (ward) about ten miles from each other. Before the advent of canal irrigation in the area in 1932, the two villages were similar in all aspects of their culture, social and economic organization. Irrigation set the two villages on to different paths of development. Wangala's lands became irrigated while Dalena's lands remained dry. The irrigation of Wangala village lands in 1939 constitutes the watershed in the village's recent history ; it is the time gauge for events of the past. Dalena is situated at the fringe of the irrigated area, but unfortunately for its inhabitants the village lands lie above the canal level and cannot be irrigated. Though Dalena has remained a dry village the advent of canal irrigation in tha area forms the turning point in the village's recent development. New economic opportunities resulting from irrigation and the proximity of a growing town enabled Dalena villagers to share in the growing prosperity of the area.

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Wangala lies about four miles to the south and Dalena six miles to the west of Mandya, the nearest town. Mandya was no more than a large village before irrigation reached the area. Between 1931 and 1941 Mandya's population increased from 5,938 to 11,374 by large scale immigration ; by 1951 it had reached 28,158 (Census 1956 : 12). In 1933 a sugar factory was started at Mandya and in 1936 Mandya District was carved out of Mysore District and Mandya became the centre of the new District Administration. Mandya lies on the major highway and railway connecting Bangalore and Mysore, the two big cities in Mysore State. Simultaneous with its growth Mandya developed the amenities of urban centres : a picture house, bazaars and coffee shops opened. Mandya's weekly fair now fetches crowds of villagers from a radius of about 20 miles. The new employment opportunities attracted entrepreneurs and labour from a wide area.

The population of Wangala is 958 living in 192 households and that of Dalena 707 in 153 households[4]. In both villages Peasants make up the majority constituting about 70% of the population. The remainder is composed of a number of servicing castes and an Untouchable community in a settlement slightly apart from the village caste households and forming about 10% of the population. Peasants are not only dominant numerically but also in the economic, political and ritual sphere. 95% of the total lands owned by residents in the two villages belongs to Peasants, though amongst them landholding is dispersed on the basis of small owner-cultivators. The hereditary village headman is a Peasant and so are all members of the village *panchayat* (council). In the ritual sphere, too, Peasants are dominant. Although in Wangala there are three families and in Dalena one family belonging to the Lingayat Priest (*Aradya*) caste, who rank higher than Peasants in the inter-eating hierarchy of castes in the village, Peasants perform most ritual functions in village ceremonies. Thus Peasants in both villages enjoy decisive dominance (Srinivas 1959 : 15).

Before canal irrigation reached Mandya area both Wangala and Dalena were dry villages with economies which could be described as predominantly subsistence. Ragi (*eleusine corocana*)

and jowar (*sorghum vulgare*) were the major crops and these were grown on dry lands. Sericulture and cattle-breeding and trading provided the only substantial source of cash income but were not widely practised. Very few farmers had any crop surplus for sale. Irrigation made land more remunerative by permitting the growing of cash crops such as paddy and sugarcane. When irrigation reached Wangala the newly established factory in Mandya encouraged farmers in the surrounding villages to grow sugarcane. This induced Wangala farmers to experiment with cane. The total yield of one acre of sugarcane, expressed in money terms, is about eight times that of an acre of ragi. Thus irrigation strengthened Wangala's agricultural economy by making cultivation considerably more remunerative and thereby centring the villager's attention and efforts on land and cultivation. The re-emphasis on the rural aspect of the village economy facilitated the survival of traditional political and social institutions, in spite of the radical change from a largely subsistence to a largely cash economy.

By contrast, irrigation in the area, though not in their own village, has widened the economic horizon of Dalena villagers. They bought land in neighbouring villages and cultivate it themselves. 32% of all the lands owned and cultivated by Dalena farmers lie outside the village boundary and of these just over half are wet lands, whereas only 5% of the cultivated lands within the village limits are owned by outsiders. Compared to this as much as 35% of cultivated lands in Wangala are owned by outsiders of which slightly less than half are wet lands. On the other hand, only 4% of all the lands owned and cultivated by Wangala farmers are situated outside the village boundaries. The landholding pattern of Dalena and Wangala exhibits a significant difference in the development of the villages. Dalena villagers became landholders in a number of different villages ; they entered into new master-servant relationships in new villages ; they competed with a new set of people and co-operated with a new set of people, all outside their own village. Wangala villagers confined their economic interests to their own village and to their own lands.

The widening of the economic horizon of Dalena villagers

is further demonstrated in the diversification of their economy. Every day 26 men representing 13% of the male population of working age travel the distance to Mandya to go to work there ; 20 men are employed at the sugar factory, two men are clerks, one a peon and three are drivers. 21 of these 26 commuters are Peasants. A number of Dalena Peasants have become contractors for the Public Works Department. They began their enterprise when the canals were first built in the area and have now branched out into road and bridge building. Other Peasants have bought carts and deliver sugarcane from neighbouring villages to Mandya at a daily hire charge. Labourers from Dalena go to work in neighbouring villages ; Dalena has become a centre for bullock sales. At the beginning of each year, after the harvest of the main dry crops, large cattle fairs are held in Mysore State. Some Dalena Peasants walk as far as 100 miles to these fairs where they purchase cattle with a view to reselling. These fairs are economic and social events in the life of Dalena Peasants. They meet farmers from a wide area ; they learn about cattle, prices and bargaining ; they hear gossip and enjoy the fun of the fair.

Dalena's headman owns a flour mill and grocery shop in the next village. His younger brother owns a flour mill and cane crusher in Dalena. To install power machinery, electricity had to be brought to the village. Electric light and the power mill have had important effects on the economic activities of women, on the interdependence of households at ceremonies and on the daily behaviour pattern and outlook of villagers. Women used to dehusk, pound and grind grain and spices by hand ; this work is now mostly done in the mill. The great quantities of paddy and ragi required at times of weddings or other feasts used to necessitate the co-operative effort of women belonging to one lineage. The presence of a mill in the village makes this joint effort superfluous, and the customary expression of a lineage's economic co-operation and unity during weddings and other feasts is becoming redundant.

Dalena's traditional economic organization has been largely demolished because economic activities have been diversified.

Employment of servants has ceased to be hereditary and is no longer paid annually in kind. Nowadays labour is paid in cash and selection is by performance. Rituals which signified the interdependence of masters and servants have become redundant. The Dalena Untouchable is no longer the hereditary *halemaga* (old son) of his master (Srinivas 1955a : 25). He no longer receives an annual reward for his services to his Peasant master nor does he come to help in the wedding preparations in his master's household.

Economic development in Dalena took the form of diversification and integration of the village into the wider national economy. This economic integration is reflected in a political and social integration into the wider polity and society. It is accompanied by a disappearance of multiplex relations within the village.

By contrast, Wangala has remained a wholly rural and largely discrete economy. The only link through which it derives cash from the wider economy is through the sale of sugarcane to the factory in Mandya. The monopsonistic position of the factory *vis-a'-vis* the farmer has saved him from having to acquire skills of acting in a commercial economy. Irrigation brought a once and for all change to Wangala by making its lands more productive without diversifying economic activities ; it left relations between landholders and labourers unaffected. Thus it strengthened the traditional rural economic organization and ensured the persistence of the traditional political social organization.

It is against this background that I want to discuss in this paper some of the changes that have taken place in Peasant marriage procedure in the two villages as a result of their different economic development. Firstly, I shall show how recent developments have brought about changes in the selection of marriage partners. Then I will show the changes in the ceremonial aspect of Peasant weddings. Finally, since most discussions on marriages among Indian peasantry have emphasized the uneconomic and irriational extravagance of expenditure I have chosen to elaborate more fully the kind of factors responsible for the high cost of Peasant marriages. I

shall argue that the increased concern over weddings expresses a struggle for prestige in a closely-knit community on the one hand while on the other integration of the village into the wider economy and society leads to the development of other criteria of prestige, *i e.* the possession of items such as gold, watches and bicycles which are readily transportable and can be easily shown off outside one's own village.

Selection of Marriage Partner

Every Peasant wants to find a wife for his son mainly in order to ensure descendants for his family and to continue his lineage. Peasants are patrilineal and marry virilocally. When a son reaches the age of about 18 to 20 years his parents normally decide to look around for a suitable wife for him. Their search is limited by the rules of caste (*jati*) endogamy and lineage (*votara*) or clan (*palu*) exogamy. There are no cases of inter-caste marriage in either village. Close inter-marriage within the caste is also prevented by the exogamous rules of lineage and clan.

Wangala's Peasant caste members constitute two exogamous clans and four miscellaneous lineages (*childre votaras*) for which the lineage is the exogamous unit. Clan and lineage exogamy restricts intra-village marriage. Yet a comparison between the marriages of Wangala Peasants, which I recorded in genealogies traced over four generations and the existing marriages shows that 54% of the existing marriages were contracted between native Peasant men from Wangala and women from other villages, whereas as much as 85% of the recorded marriages (excluding existing marriages) were inter-village unions. This trend towards a greater concentration of marriage ties within the village may be explained by two factors : first, newcomers to the village and members of the miscellaneous lineages have increased the circle of potential spouses for the exogamous groups of indigenous clans ; secondly, since irrigation the cultivation of sugarcane absorbs so much of the time of Wangala farmers that they now have little opportunity for touring neighbouring villages to arrange marriages for their sons. At the same time the trend in the marriage pattern

reflects the greater concentration of interests of Wangala Peasants on their own land and on their own village economy. Nowadays initiators of inter-village marriages are usually Peasants from neighbouring villages who are keen to strengthen their economic links with Wangala by kinship ties.

At a time when the growing of cash crop has integrated Wangala's economy, at least to a certain extent, into the regional economy and polity, intra-village marriages have strengthned the network of intra-village relations. These two supplementary processes are going on simultaneously and they are responsible for a blending of the affirmation of traditional social relations aud material innovation in Peasant weddings in Wangala. Traditional wedding practice for instance is represented by Peasant rituals and by the paying of bride-price, innovation by the procession of the bridal pair by car or jeep through the village by western dress of the groom. Such innovations involve the expenditure of cash, whereas the traditional services required at Peasant weddings are paid for in kind according to custom laid down among Peasants.

TABLE 1

Radius of Peasant man's inter-village marriage links

(*extant marriages*)

Miles	*Wangala*		*Dalena*	
	Nos.	%	Nos.	%
0— 2	11	14	23	22
2— 4	27	36	52	50
4— 6	14	19	8	7
6— 8	5	6	5	5
8—13	6	8	2	2
10 and over	13	17	15	14
Total	76	100	105	100

If the argument that the spread of affinal links reflects the spread of economic interests is correct we are justified in expecting a higher percentage of inter-village marriages in

Dalena than in Wangala. This is in fact borne out by Dalena marriage statistics. Although in Dalena there are fourteen Peasant lineages, each of which is an exogamous unit, whereas in Wangala there are only six, therefore creating more possibilities for intra-village unions, there is a higher proportion of inter-village marriages in Dalena than in Wangala. A comparision between the recorded marriages of Peasants (*i. e.* those marriage occuring in agnatic genealogies of four generarations depth) and the existing marriages shows that whereas among existing marriages 68 5% were contracted between a native Peasant from Dalena and a woman from another village, of the recorded marriages (excluding existing marriages) only 44% were such inter-village marriages. This shows a trend towards a greater proportion of inter-village unions which can plausibly be explained by the marriage pattern following the pattern of landholdings in neighbouring villages. As Dalena farmers bought wet lands in neighbouring villages they wanted to strengthen their foothold in these villages by marriage ties.

Since Dalena men prefer to marry girls from neighbouring villages Dalena girls have to find husbands outside their own village. Men from neighbouring villages choose Dalena girls as wives for their sons because they wish to establish affinal links with Dalena entrepreneurs and town workers. They consider it advantageous to be related to a contractor or urban worker because they hope that the affine may help to find them a job in town. Significantly, Dalena girls mostly marry men from dry villages who are all eager to find a place for themselves in the wider economy, whereas Dalena men marry girls from neighbouring irrigated villages.

Of the existing Peasant marriages between Dalena men and women from other villages 22% are with women originating from villages within a radius of two miles and another 50% are with women from villages between two to four miles distant from Dalena (see table 1). Thus 72% of all existing Peasant inter-village marriages in Dalena are between men from the village and women from villages within a radius of four miles, which is the area in which Dalena men have their wet landholdings in neighbouring villages. 14% of all the existing inter-

village marriages are between Peasants from Dalena and women coming from places outside a radius of ten miles. These wider spread marriage ties developed when Dalena men migrated to towns further away and there arranged marriages between their Dalena relatives and women from the towns or villages in their vicinity. If we compare these figures with the affinal spread of Wangala Peasant marriages we find that while 50% of all existing inter-village marriages are with women coming from villages within a radius of four miles, this figure is as much as 72% for Dalena inter-village marriages. This difference displayes the importance of nearby villages to Dalena Peasants. Affinal ties have become much more important to them since irrigation in the area. Some Dalena Peasants were able to buy lands in the villages of their affines because of the latter's knowledge of land for sale. A man visits his affines much more frequently if they happen to be in a village in which he owns some wet lands. He may even take his meals in his affines' home while he is working on his wet lands in their village. His relationship is much closer than it is with affines in other villages in which he has no personal economic interests. Furthermore, a man is more likely to hear of a suitable bride for his son in villages which he visits frequently because of his economic interests than in which he has no such interests. Thus economic links both cause and are affected by affinal ties.

In Dalena it is usually the young man's father and father's brothers who seek out a bride for him, while in Wangala the custom changed to his mother and sisters looking for his bride. This change is in line with the changed status of women in Wangala, where Peasants have come to regard it as a matter of prestige for a man to relieve his wife from work on his lands. Thus women have more time than men to go in search of a bride for their sons. By contrast, Dalena women are still the pillars of the indigenous dry land economy and thus have less opportunity than their husbands of hearing of a suitable bride for their sons.

Peasant girls usually marry at the age of about ten years and there is an interval of about three years between their

wedding (*lagna*) and their consummation ceremony (*sobana*) which takes place about three weeks after the onset of their menstruation. During my one year's stay in each village I witnessed eleven Peasant weddings in Wangala and five in Dalena. Of all these weddings only one, namely that of one of Wangala's poorest Peasants, was with a girl who had already started menstruating. This was a marriage arranged by a man for his younger brother since their father was dead. The elder brother at first claimed that the girl had started menstruating after the begining of marriage arrangements, but finally he admitted that it was more economical for his brother to marry a girl who was already mature ; it would save them the extra expense of the consummation ceremony and would also allow his brother to set up his independent household as soon as he was married instead of having to wait for years before his wife attained puberty. This man was obviously trying to reach a compromise between the high marriage expenditure demanded by struggle for prestige and the meagreness of his resources. By claiming that the girl had attained puberty after the commencement of marriage negotiations he inferred that he was abiding by the Peasant custom of marrying young men to girls before the latter had reached puberty. On the other hand, by actually arranging a post-puberty marriage he could spend a lot more on the wedding itself than if he had to arrange for a separate consummation ceremony some years hence.

Marriage negotiations are not concluded hastily. There may have to be many family consultations first, after two or three likely brides have been picked out. Each of these cases is carefully considered in the young men's family circle, attention being paid to the girl's appearance, the economic status of her father and the number of brothers and sisters she has got. A pretty, light-skinned girl is generally preferred, especially if the young man is handsome. Poorer Peasant farmers seek for their sons brides who have no brothers so that the sons may stand a chance of inheriting their father-in-law's lands. Usually Peasants select brides for their sons' coming from families who belong to the same economic category[5] as

they themselves. This tendency was displayed in all the marriages I witnessed in Wangala as well as in Dalena.

According to Peasant custom all marriages take place between the middle of April and the middle of June. This marriage season fitted in well with the cycle of dry land farming activities. After the harvest in January farmers were free to look for brides for their sons and by about March the first ritual could start and the wedding take place in May. The farmer had by then accumulated sufficient resources and foodstuffs for the wedding feast. On completion of all the wedding rituals his son was again ready to help him with ploughing their dry lands after the first heavy monsoon showers in July. Although irrigation changed the cycle of agricultural activities Wangala Peasants still perform their weddings during the customary period.

Ceremonial Aspect of Peasant Weddings

As in other parts of India, for instance among the Jats of Rampur (Lewis 1958 : 139), the process from betrothal to the consummation of marriage covers a number of years among Wangala and Dalena Peasants. Three stages may be singled out. The first is the preparations for the wedding, consisting in the marriage agreement and the groom's and bride's father going together to the groom's family Brahmin priest to fix an auspicious date for the wedding. Unlike the higher castes Peasants do not have horoscopes and therefore do not have to consult the priest on whether the horoscopes of the young couple match. Various rituals are performed in the bride's house and the preparations for the wedding take place in the groom's house. The second stage is the wedding itself. In Dalena Peasant weddings last only one day, in Wangala they now take three days and are much more elaborate. The third stage is the consummation ceremony which takes place about three weeks after the bride has started her first menstruation.

Now I shall give a brief outline of the various rituals in the Peasant wedding procedure and shall show at each step the similarities and differences between Peasant practices in Wangala and Dalena.

I. Preparations For The Wedding

1. *Oppige* (Marriage agreement ceremony).

After the initial unofficial agreement of marriage between the father of the young man and that of the girl the first ritual takes place in the girl's home. In the case of an inter-village marriage theoretically all the lineage elders from the boy's and the girl's village should be present at the marriage agreement ceremony. But in practice usually only a few of the elders are present. If it is an intra-village union only the lineage elders belonging to the same faction as the households of the boy and the girl attend the marriage agreement ceremony. Wangala women accompany their menfolk when they go to an *oppige*, Dalena women do not do so. If there is an *oppige* in one of the Dalena households the girl's female relatives do not participate in the function ; they just peep out from the kitchen and hand out the articles needed for the ritual.

In the bride's house mats are spread out in front of the wall facing east on which are arranged two lights in silver or brass lamps and between these lights is placed a *puja* (worship) plate containing a small holder of the holy fire (*duparti*), a mirror, nine kinds of grain mixed and put into five bundles tied in cloth, plantains, rice, jaggery, a small vessel (*kalesha*) filled with rice and covered on top with betel leaves and nuts, sandalwood sticks and some betel leaves and nuts. The groom's party settles down to the left side of the lights and the bride's party to their right. First the elder of the bride's lineage does *puja* (worships) by breaking off the ends of the plantains on the *puja* plate, circling the holy fire over it, lighting some sandalwood sticks and prostrating himself in front of the plate. Then he sits down and addresses the elders of his own village, saying : 'Dalena (or Wangala) people have come to ask for a bride from our village, do you agree to give them the bride ?' After the lineage elders from the bride's village have agreed to give her in marriage, the groom's lineage elder says to the elders who have come along with him from his own village : 'The people from this village have agreed to give their daughter in

marriage to our village, what is your opinion ?' If they all agree, as they usually do, the marriage is officially sanctioned by both the bride's and the groom's village representatives. Then the bride's lineage elder asks the father of the groom to state what presents he intends to give to her. At *oppiges* between a Dalena men and the bride's father from another village the latter usually accepts the list of jewellery and clothes offered to his daughter by her future father-in-law without further argument, whereas at *oppiges* between a Wangala Peasant and the bride's father from the same or another village there is usually an argument as to the items of jewellery and the latter sets demands for more expensive presents for his daughter. He is fully aware of the prestige value Wangala Peasants attach to elaborate weddings and therefore tries to exploit it to his daughter's advantage. Frequently the groom's lineage elder has to appeal to the generosity of the groom's father, so as to make the two parties reach agreement. No questions are asked as to what presents the bride's father will give to the groom. As soon as the two parties have agreed one representative from each party gets up, usually the groom's and bride's father's brothers ; they wash their hands and feet and then are given each a garland and a plate containing puffed rice, plantains, betel leaves and nuts. The two men garland each other and then the groom's representative gives his plate to the bride's representative saying : 'I will always be giving you much' whereupon the latter hands his plate to the former saying : 'You gave much and I am prosperous'. This symbolic exchange between the representatives of the two parties finishes the *oppige*. Betel leaves and nuts are then distributed to all present, the *puja* articles are taken away and a meal is given by the bride's household to all the elders present.

2. Fixing of auspicious marriage date.

About a fortnight after the *oppige* the groom's and bride's fathers take along offerings of about four pounds of rice, some betel leaves and nuts and plantains to the groom's family Brahmin priest who for Dalena Peasants lives in Mandya, but

for Wangala Peasants lives in another village about seven miles distant. They present the offerings to the Brahmin priest together with one rupee[6] from each side and ask him to fix an auspicious date and time for the wedding. After worshipping and consulting his book of commitments he fixes the day of the wedding and the time of the *dāre* (tying of marriage pendant). There is usually an interval of about six to eight weeks between the fixing of the date and the wedding itself.

3. *Arisina-bālehannu shastra* (turmeric-plantain ritual).

Three weeks before the wedding this ritual takes place in the bride's house. The *hasemane* (marriage plank) is covered with a white cloth and put down inside the house in front of the wall facing east. A light is put at either side of it and in front of it are placed two *puja* plates. The groom's party, though without the groom being present, consisting of his village's lineage elders and his nearest male relatives in Dalena as well as his female relatives in Wangala settle down to the left of lights and the bride's party to their right.

The ritual commences with the bride's father's brother or her own brother doing *puja* from one plate, *i.e.*, decorating the *hasemane* and lights with flowers and vermilion, burning sandalwood sticks and so on. After this the groom's father's brother or his own brother does the same from the other plate. Then the groom's representative garlands the bride's representative and puts vermilion on his forehead and the latter does the same in return to the former. When these two men have settled down again the bride's lineage elder asks the groom's father, as he had done at the *oppige*, what presents will be given to the bride. Whereupon the groom's father again enumerates the presents he intends to give to the bride. Everyone present carefully listens to check if the list is the same as was given at the *oppige*. Then the bride's father is asked once more if he agrees. While in unions with Dalena men the bride's father usually consents, in unions with Wangala grooms the bride's father now begins to stipulate the value of items enumerated. For instance at one such ritual I witnessed the bride's father demanded that the sari the groom's father

intended to give to the bride must be worth at least Rs. 100. The groom's father thought this too much and there was a long argument until his own lineage elder made him agree.

The bride walks in dressed in an attractive sari, wearing jewellery usually belonging to her mother, and flowers in her hair and looking very coy. She sits down on the *hasemane*. This is the first appearance of the bride in the marriage rituals. Then five women, who belong to the bride's party in Dalena and to the groom's party in Wangala, come in and do puja to the bride. Each one puts some rice, ragi, jaggery, turmeric powder, plantains, betel leaves and nuts down in front of the bride. After this each of the five women hands the bride some betel leaves and nuts which the latter returns to the respective woman. During this part of the ritual in Dalena Peasant women stand in a group in a corner of the house singing songs, while in Wangala a group of Untouchable women is gathered on the verandah singing songs appropriate for the occasion. In Dalena, too, Untouchable women used to come and sing at this ritual in Peasant households, but since irrigation in the area and the disappearance of the hereditary links between Peasant and Untouchable households Untouchables have given up coming to sing songs at Peasant weddings and Peasant women have taken over this function.

As the last stage in this ritual the bride's father's brother's wife comes to worship the bride and takes away all the food heaped up in front of her by the five women who had done *puja* to her. Then the bride's father and his brothers and sons distribute betel leaves, nuts, plantains and flowers to all distinguished visitors while the bride gets up and walks over to the groom's father and touches his feet three times. She does the same thing to his brother and in turn to all distinguished elders present; afterwards she retires. Then the mats are removed and the bride's household serves another meal for the groom's party.

4. *Veelia Shastra* (betel leaves and nuts ritual).

About a week before the actual wedding the groom's party visits the bride's house once more and takes along a heap of

betel leaves and nuts. Each Peasant household in the bride's village is presented with a bundle of ten betel leaves and a small quantity of nuts by the groom's father's household. The distribution takes place in accordance with the custom in the bride's village. In some villages the order of distribution is according to streets and the location of the house in the street ; in other villages it is on the basis of importance and seniority. In the latter case usually quarrels develop over the distribution of *veelia*. The acceptance of *veelia* by the bride's village Peasant households symbolizes their agreement with the marriage between a girl from their own village and a young man from another village. This *veelia shastra* takes place only in case of inter-village marriages and is omitted at intra-viilage marriages.

5. Preparation in groom's household.

Wedding preparations in Wangala Peasant households stress the unity of the groom's lineage and the hereditary relationship between his household and those of other castes and Untouchables in the village. 'Any villager will tell, for instance, that at the wedding of a Peasant all the castes have to co-operate.' (Srinivas 1955a : 24). This emphasis on intra-lineage and inter-caste relations has disappeared in Dalena.

In Wangala the groom's household is invited for meals by members of his own lineage and even other lineages for at least seven days before the actual wedding takes place to enable the women of the household to concentrate on wedding preparations and be relieved of the daily household tasks. The number of invitations to meals depends on the social and economic status of the groom's household. If his father is a rich man his Peasant clients[7] will be eager to get into his good books by offering his household a meal. For instance one young and poor Peasant invited the family of a magnate's wedding household to a meal claiming that he was related to the magnate because his own mother's mother was the daughter of the magnate's wife's mother's brother. Such relationship through the female line is rarely remembered among the patrilineal Peasants and was activated by the young Peasant only in order to demonstrate his relationship with the magnate.

Women of the groom's lineage, his brothers' wives or his father's brothers' wives together with his own sisters who might have already married into another lineage and often even into another village gather to help de-husk, pound and grind the rice and ragi required for the wedding feast. At one of the magnate's weddings in Wangala as much as ten *pallas* (about 2,000 lbs.) of paddy had to be de-husked and about one and a half *palla* of rice (about 150 lbs.) had to be ground. To grind one pound of rice takes two women about one hour of hand-pounding. Thus to grind 150 lbs. required the joint effort of a number of women. In Dalena the practice of joint lineage activities by women has disappeared. With the establishment of a flour mill the task of preparing the wedding feast has been so much lightened that the groom's household need not be invited for meals by other households any more, nor is there any need for help from women of the lineage with the grinding of the rice.

In Wangala the Peasant's *halemaga* (old son), who is his hereditary Untouchable client, comes to help chop firewood for the cooking of the wedding meal. He also helps to white-wash the house. The indigenous Blacksmith (*Veerachari*) who is also somewhat of an artist comes to decorate the exterior walls of the house and the interior wall facing east in front of which the wedding ceremony is to take place. He paints scenes from the *Mahabharata* or *Ramayana* (Hindu religious epics) on the walls. The Potter (*Kumbara*) supplies the pots for the *misel neeru shastra* (sacred water ritual). The Untouchable *halemaga* plaits plantain leaves and prepares a canopy outside the house to provide shade for the wedding guests. All these services to a Wangala Peasant household are provided by hereditary servants of the Peasants who get some small monetary reward as well as foodstuffs in return ; the quantity depends on the wealth of the wedding household. The richer Peasants give also set of clothing to their *halemaga* and his wife on the occasion of a wedding in their household.

By contrast, Dalena Peasants employ members of Functionary[8] castes to perform the services they require for the preparations in the groom's household and they have to pay

cash for the work done. Instead of getting the Untouchable *halemaga* to prepare the canopy for the wedding house Dalena Peasants nowadays have to employ and pay a Basketmaker (*Koramasetty*) to perform this job. This being a single transaction without being reinforced by traditional links has to be rewarded with more money than if the job were done by the Peasant's *halemaga*, in which case it would constitute only one strand of a multiplex relationship. The disappearance of hereditary links between Peasants and other castes as well as Untouchables has thus increased the cost of the services required by Dalena wedding households.

Prior to the wedding the groom's parents pay a number of visits to the town to purchase the wedding presents for the bride. Wangala Peasants usually venture to towns further away from their village where the value of the goods they purchased cannot be so easily verified by their fellow-villagers. There they buy costly saris and blouse pieces and gold or silver pieces which they bring back to the village Goldsmith (*Achari*) who works them up into jewellery according to his customer's wishes. Sometimes they even buy ready made pieces of jewellery for the bride. The groom's parents display all their purchases to their fellow-villagers and usually claim to have paid more for them than they actually did.

Dalena Peasants are not so much concerned about impressing the high cost of wedding presents on their fellow-villagers as are Wangala Peasants and therefore they do not attempt boasting of the prices they paid for the individual items purchased. Thus they do not need to venture further than Mandya for their shopping.

II. *LAGNA* (WEDDING).

All the eleven Peasant weddings which took place during my stay in Wangala lasted for three days, whereas only one, namely that of the magnate, out of the Dalena Peasant weddings I witnessed took more than one day. Three-day weddings are a recent introduction among Wangala Peasants. Prior to irrigation weddings used to take only one day. Though even before irrigation weddings used to provide the arena for status

struggle, it is only since greater prosperity has come to the area that weddings have been extended over three days. The longer wedding period enables Wangala Peasants to elaborate the individual rituals. Thus while on the whole Wangala and Dalena Peasants perform the same wedding rituals, in Wangala each ritual is more drawn out and more elaborately performed.

First day : *Hasekamba divasa* (marriage poles day).

6. *Hasekamba shastra* (marriage poles ritual).

The first sign of the beginning of a wedding is the arrival of a band. In Dalena the band usually consists of three men : a drummer, a flute player or trumpeter and a bagpipe-player, while in Wangala households compete with each other over who can employ the bigger and better band. One of the magnates employed a six men band from Mandya, whereas one of the middle-farmers hired a five men band from Mysore, the nearest city about 30 miles from Wangala.

The wedding ceremony commences with the groom's brothers or father's brothers or their sons going outside the village to cut down three poles about eight feet long each from a *Galli* (cactus plant) which they carry in procession to the village *Hanuman* (monkey god) temple. Every procession in the course of the wedding is headed by the band. In Dalena *dasayas* (Peasant acolytes) anoint the poles in front of the temple, while in Wangala the Temple Priest (*Ostaman*) comes specially for the occasion from the neighbouring village where he lives. In Wangala the groom's father or his brothers distribute betel leaves and nuts to all Peasants gathered in front of the temple and also to all other castes and lastly to all Untouchables. This is not done in Dalena at all.

After the *hasekamba* has been anointed and sanctified by holy water being sprinkled over the poles they are carried in procession to the groom's house. In Dalena each bearer simply plants the poles round the centre opening of the house and they are then covered by white cloth to form a canopy. In Wangala the groom's father's eldest brother plants all three poles by laying down a heap of mud, making a hole into which

some gold or silver pieces are placed, pouring some milk over them and then planting the pole in the mud.

7. Procession of bride to the temple.

If the bride is from another village the band and a crowd of Peasants from the groom's village go out to meet her at the border of the village whence she walks in procession to the *Hanuman* temple. She settles down with some women from her own side in a corner of the temple. In Wangala betel leaves and nuts are again distributed to all present on the arrival of the bride ; this is not done in Dalena.

In Wangala, where the bride has to spend the night before the actual wedding day she then walks in procession to the wedding house. Before entering the groom's sister washes her feet. The bride is taken to a room allocated to her and her party where she is decorated with flowers. Then she walks to the *hasemane* which is laid down in front of the wall facing east and she sits down on it. Women of the groom's household place plates in front of her with rice, plantains. coconuts, jaggery, betel leaves and nuts. After this two women from her lineage and two from her groom's lineage worship her. Then men from the bride's lineage distribute betel leaves and nuts to all present. This part of the ceremony has evolved only since Peasants have started celebrating three-day weddings and is not performed in Dalena.

8. *Misel neeru shastra* (sacred water ritual).

A procession leaves the groom's house carrying five new empty pots to the pond. The procession is headed by the groom's sister or his father's brother's daughter carrying a *puja* plate. The five pots are supplied by the village Potter in Wangala, while in Dalena they are bought at Mandya's weekly fair. Two of the pots are small, representing the female deities of the groom's and bride's lineages. Two larger pots represent the male deities of the two lineages and one very big pot is said to represent the brotherhood of all gods.

At the pond the village Washerman (*Agasa*) swings a large torch in the four directions of the earth. Then the pots are

filled with water from the pond. Afterwards they are placed on a white cloth spread out on the ground, where they are decorated filled with fibres of green coconuts, anointed and worshipped by the Peasant acolyte in Dalena and by the groom's lineage elder in Wangala.

The procession returns to the groom's house headed by the girl carrying plate and followed by three boys or men from the groom's lineage carrying two pots representing their lineage deities as well as the large pot and by two boys or men from the bride's lineage carrying the other two pots. The whole procession now being sanctified by carrying the *devaru madhiike* (pots of the gods) walks on old saris which are spread out in front by the Washerman and collected by his wife after the procession has passed on to be put down again in front. The pots are placed in the kitchen of the groom's house where they remain for the duration of the wedding.

Second day : *Lagna divasa* (wedding day).

9. *Muyee snana* (exchange bath).

The groom walks in procession to the house of a near relative, usually his brother or his father's brother, where the Barber (*Ajumra*) shaves him and he is given a bath[9] by women from the birde's lineage while in Dalena Peasant women sing songs and in Wangala Untouchable women do so. The groom dresses in the wedding clothes given to him by his bride's father in Dalena, whereas in Wangala his clothes are usually provided by his own father. Dalena grooms wear the traditional type of dress, a shirt over a dhoti, whereas Wangala grooms usually parade in city-type clothing. One groom was even made to wear shoes, a novel and painful experience to him. The Barber helps to put the turban on the groom's head.

After the groom has gone for a bath, in Dalena the bride walks in procession to the groom's house where she is allocated a special room for herself and her party. In Wangala she has already stayed the night in the house while the groom slept in the house of a near agnatic relative. Groom and bride are not supposed to set eyes on each other until the moment in the wedding ritual when the curtain is dropped between them.

The first ritual involving the bride on the wedding day is the bath given her by women of the groom's lineage. Thus while women from her lineage give her groom a bath, women from his lineage give her a bath. Therefore the term 'exchange bath.'

The bride then dresses in the blouse and sari provided for her by her groom's father.

10. *Kankala sastra* (grain bundle ritual)

The groom's lineage elder prepares a mixture of *aidana* (five different types of grain), puts it into a small piece of cloth dipped into saffron and ties the bundle round the right wrist of the groom.

In Wangala the tying of the *kankala* is followed by another recently introduced ritual which commences with five women from the groom's lineage washing his feet and worshipping him. Then the groom squats down, folds his hands and spreads out his fingers. His lineage elder takes small ragi cakes and puts one between each of his fingers, one on each of his shoulders and one on his head. The five women who did *puja* to the groom stand behind him and hold a *puja* plate over his head in front of him. In turn one of them comes in front and washes the hands of the other four holding the plate by pouring water over their hands. When this is done the lineage elder removes the ragi cakes from the groom. Peasants explain this ritual by saying that it symbolizes the importance of ragi, the traditional dry land crop, in spite of the change over to rice, a wet land crop, as the staple diet. It would seem that in Dalena where ragi is still the dominant crop and ragi forms a major part of the villagers' diet there is no need to stress its importance to a newly married man and therefore this ritual is not performed.

In the same way as the groom's lineage elder ties the *kankala* round his wrist so does the bride's lineage elder round her wrist.

11. Putting of jewels on the bride

The groom's village Goldsmith and his wife come to the bride in her groom's home. While the bride sits down on the

hasemane the Goldsmith's wife does *puja* to her. Then the Goldsmith takes out the jewellery he has made up for the bride on the instructions of her groom's father and puts it on her. In Dalena where the jewellery is often bought ready-made and the village Goldsmith does no work on it, the groom's lineage elder puts the jewellery on the bride.

12. *Bale shastra* (bangle ritual)

Peasant women bangle sellers residing in neighbouring villages come to Dalena and Wangala on the occasion of a wedding. After the Goldsmith has put the jewellery on the bangle seller settles down in front of the bride and puts bangles on her arms ; these are paid by the groom's father and it depends on his wealth and generosity how many bangles the bride receives. Brides of Wangala grooms receive many more bangles than those of Dalena grooms. Once the bangles have been put on, the bride prostrates herself in front of the pile of bangles which the bangle seller has brought along and also in front of the bangle seller herself. This is to show the young bride's respect for ornaments.

13. *Devaru pettige* (god's box) procession

While the rituals are being performed over the bride the groom walks in procession headed by the Washerman carrying the *devaru pettige* containing various marriage articles (such as for instance the white cloth to be held in front of the groom to shield him from view of his bride) to the *Hanuman* temple. The custom of carrying the marriage articles in a bamboo box symbolises belonging to one Peasant sub-caste. 'The two chief endogamous divisions (among the Gangadikara Peasants) are Pettigeyavaru and Bujjanigeyavaru. The former derive their name from the custom of carrying their marriage articles in a bamboo box and the latter from the custom of carrying them in a covered basket.' (Hayavadana Rao 1927 : 243)

In Wangala the Temple Priest receives the party at the temple and sprinkles holy water over them, while in Dalena the Peasant acolyte performs this function. Friends of the groom then anoint the Washerman with different colours. The groom waits in the temple until word comes that the

rituals over the bride are finished. Then the groom walks in procession again headed by the Washerman carrying the *devaru pettige* to his home, while the bride retires to her room. A girl of the groom's lineage, usually his younger sister does *puja* to him and washes his feet before he enters the house.

14. Walking round *hasekamba* (marriage poles)

On entering his house the groom walks three times round the *hasekamba* following his unmarried real or classificatory sister who carries a *puja* plate. He stops at each of the four directions of the earth to give his *namaste* (greetings). Then the *hasemane* is placed under the canopy which is held up by the *hasekamba* and the groom stands on top of it facing east. The Washerman hands the white cloth out of the *devaru pettige* to two male relatives of the bride who hold it up in front of the groom's face.

After this the bride is brought in and she also walks three times round the *hasekamba* following her unmarried real or classificatory sister carrying the *puja* plate. She also offers her *namaste* to the four directions and then stands on the *hasemane* opposite her groom who is still hidden from her view by the white cloth held up in front of him.

14. Brahmin priest recites *mantras* (sacred verses)

The Brahmin priest stands to the left of the groom facing south. Behind the bride stands her mother's brother, or if he is dead his son takes his place. If the mother has no brother the man who inherits her father's property performs this part of the function.

Wangala Peasants insist on a Brahmin priest performing this ritual, while Dalena Peasants accept the Temple Priest for it. During my stay in Wangala the Brahmin priest sent word with his 12 year old son that he was too ill to attend the wedding. The Peasants made the young Brahmin boy perform the ritual. He was still unaccustomed to these rituals and had to be told what to do by Peasants at each step of the ceremony. By contrast, at two of the five Dalena weddings I witnessed to the Brahmin priest failed to arrive and Peasants asked the Temple Priest to perform the ceremony.

The priest mutters *mantras* while he gives some rice in turn to the bride and groom to put over each other's head while they are still hidden from view of each other. Usually the mother's brother lifts the bride up to put the rice over her groom's head.

15. *Hovu shastra* (flower ritual)

Then the cloth is removed and for the first time bride and groom face each other. The priest gives a flower chain to the groom to put round his bride's neck and gives another one to the bride to put round her groom's neck. He makes the couple exchange these flower chains three times and finally leaves them round their necks. The mother's brother guides the bride's hands while she is garlanding her groom. By this he publicly demonstrates that he has relinquished his right to marry his sister's daughter himself or to his son.

16. *Hālu shastra* (milk ritual)

The priest then puts some rice and a coconut into the groom's hands and some rice and two plantains into the bride's hands. They have to hold their hands in cupform, the groom's over the bride's hands. The priest hands a vessel containing milk into which he has put some saffron to the bride's father, who stands with his wife next to the bride during the whole ritual. He must turn round and *namaste* the four directions. This gives a last chance to anyone who wishes to object to the marriage. Then the bride's father pours some milk out of the vessel over the groom's hands, which drips down over the bride's hands and is collected underneath into a small vessel. The priest repeats the performance with the groom's parents. If the mother of the bride or groom is a widow she must not participate in the wedding ritual, for Hindus regard widows as ritually inauspicious. The place of the parents is then taken by the father's brother and his wife. For instance one of Dalena's magnates had married a widow. The marriage of a widow (*kuduvali*) is a very austere affair without a priest officiating. At their son's wedding they did not take any active part in the ritual; their place was taken by the magnate's younger brother and his wife.

In Wangala the groom's parents and the bride's parents as well as her mother's brother must put some coins on the Brahmin's *puja* plate for which he gives them a vermilion spot on their foreheads. In Dalena no such money gift is required.

The milk vessel is then handed to other relatives and friends of the couple who each pour some milk over their hands to show that they wish them an abundance of goods in their lives.

In the meantime the priest sits down and prepares the *tali* (marriage pendant) plate by putting rice, plantains, sandalwood sticks, betel leaves and nuts on a brass plate and placing the *tali* on top of a piece of jaggery. The plate is then handed round to relatives and friends of the couple who touch the *tali* and then their eyes to indicate that they will respect the new marriage.

17. *Dāre* (tying of marriage pendant)

The priest goes again up to the couple and while he recites *mantras* makes the groom anoint the back of the bride's neck and gives him the *tali* to tie round her neck. This is the actual symbolical part of the marriage ritual similar to putting the ring on the bride's finger in western society. The *dāre* is the most important ritual of the whole wedding ceremony and usually the time for it is fixed in advance at the time the Brahmin priest fixes the wedding date. If wedding invitations are printed the time of the *dāre* is always indicated, although only rarely is the *dāre* performed according to schedule.

After the *dāre* the priest knots the end of the groom's shoulder cloth to that of the bride's sari and links the little finger of the groom's right hand to that of the bride's left hand. Thus linked the couple walks to the wall facing east which has been specially decorated for the occasion. The *hasemane* is put down for them and they sit down on top of it, the bride to the right of her groom.

18. Coconut ritual

The priest sits down to the left of the groom. He puts a large plantain leaf in front of the couple on which he places a heap of rice (about 5 lbs.), on top of which he places five large green coconuts and on top of each of which he puts some jaggery, plantains, betal leaves and nuts. All these articles are provided by the groom's household. While the priest mutters *mantras* he makes the couple perform various *puja* over the five coconuts. For instance the groom and then the bride have to anoint the coconuts. The five coconuts are one each for the groom's and bride's gurus and lineage gods and one for the groom's village god. As soon as this ritual is over the coconuts are handed to representatives of the two gurus and three gods' temple priests respectively. The couple then anoints a number of coconuts, plantains, betel leaves and nuts which are distributed among relatives and distinguished guests. The rice is taken by the Brahmin priest.

19. *Tere hanna* (bride price)

The bride price amounting to Rs. 20.25 must then be handed tied in a saffron dipped cloth by the groom's father to the priest who blesses it and gives it to the bride's father. The literal translation of *tere hanna* is 'curtain price'; thus it is regarded as the payment for dropping the curtain that separates groom from bride during the first part of the wedding ceremony. As far as I could establish the amount of the bride price has remained unchanged for at least four generations in both Wangala and Dalena.

20. *Muyee Patte* (list of presents)

A literate relative of the groom and one of the bride sit down each with their respective parties and prepare the list of wedding presents. Wedding guests hand over their presents while the name of the donor, his village and the amount he has given is noted down.

On the day of a wedding in the village each Peasant householder takes out the *muyee patte* prepared at his own wedding or that of his sons and checks up how much he received from the wedding household. On each list settled *muyees* are ticked

off to show up the yet unsettled *muyees*. *Muyee* literally translated means 'exchange'. Thus wedding *muyee* operates like a credit co-operative in which each member has a share amounting to the total quantity of *muyee* he has given to other households and which he gets back in one lot at a wedding in his own household.

In Dalena the tendency is to give exactly the same amount to a wedding household as the donor received from it on the occasion of his own wedding or that of his son. No Peasant will start a *muyee* unless there is a likelihood of the *muyee* being completed in a few years from its start ; *i.e.*, if the man has a son or daughter of marriagable age. If a man who has one son receives *muyee* from a man with three sons, he will return *muyee* only to one son which completes the obligation.

In Wangala the tendency is for Peasants to give more than they received as *muyee*. The average *muyee* received by a groom in Wangala was Rs. 101 for the eleven Peasant weddings I witnessed, ranging from Rs. 45 to Rs. 182, on top of which amount the groom received presents in kind such as silver cups, deity images and photos and some items of clothing. The average *muyee* in Dalena of the five peasant weddings held in 1956 was Rs. 74 ranging from Rs. 33 to Rs. 183.

In pre-irrigation days *muyee* used to cover almost all the monetary expenditure of a wedding household. It meant that a wedding household got aid at a time when it needed it very much and had to repay it in small instalments. Nowadays *muyee* covers only about 10% of the monetary expenditure of a wedding. The *muyee* received by a bride is usually only about 50% of that received by her groom. Since the bride's father's expenses are only a small percentage of those of the groom's father the former has no such urgent need for cash presents as the latter.

If a man gives a *muyee* of over than Rs. 25 he receives the amount back immediately, the idea being that the recipient might not be in a position to repay such a large amount when the occasion arises. For instance one groom's mother's brother in Wangala gave Rs. 100 which were immediately returned to

him. The usual amount of *muyee* varies from Re. 1 to Rs. 5 in Wangala and from Re. 0.50 to Rs. 3 in Dalena.

After all the presents have been handed over and recorded the money is taken by the groom's and bride's father respectively and the *muyee patte* stored away carefully in an old trunk to act as guide for the amount the household has to give as *muyee* at future weddings in the village.

21. *Akki shastra* (rice ritual)

While the male wedding guests settle down for a meal, women follow the bridal pair who in Dalena walks and in Wangala often drives in procession to the *Hanuman* temple. There the couple stands facing the temple entrance on top of the *hasemane* carried there for them by the Washermen. Their garments are still linked to each other. Whereas in Dalena the Peasant acolyte sprinkles holy water over them in Wangala this is done by the Temple Priest. Then Peasant women stand in front of the bridal couple on the temple steps and throw rice over them while in Dalena Peasant women and in Wangala Untouchable women sing songs inviting women to come and view the bridal pair. According to Peasant beliefs the throwing of the rice symbolizes the wishing of abundance of food for the young couple.

Afterwards the bridal pair says *namaste* at the *Marichoudi*, the temple of the village deity *Maramma* and then the whole procession returns to the groom's house where in Dalena the couple and all the women settle down to a meal, whereas in Wangala the couple sits down once more on the *hasemane* with a plate of rice and ghee in front of each of them. Each mashes the rice with the ghee and then the groom places most of his rice on the plate of his bride and she in turn puts all the rice from her plate on to his. This they do three times after which the rice is taken away and then they receive each their separate meal. In Wangala this ritual is done to symbolize the duty of sharing food between husband and wife.

22*a*. *Veelia shastra* (betel leaves and nuts ritual)

In Dalena the *veelia shastra* takes place after the meal and in Wangala on the third day of the wedding ceremony. There

is a fixed amount of betal leaves (ten leaves) and a bundle of nuts which must be distributed first to outsiders, then to all Peasant households in the village and lastly to all ritual officeholders such as *devaru guddas* (mediums) and such like. The distribution of *veelia* to village householders is in terms of residence in streets and not on the basis of seniority or importance. Yet quarrels always arise over who should receive *veelia* first especially among outsiders where there is no fixed order of distributions. The groom's father has the choice of either distributing *veelia* or paying Rs. 12 to the village *panchayat* fund. Some men prefer to pay Rs. 12 rather than to have quarrels at the wedding of their sons. In Dalena at two of the five weddings there was no *veelia shastra* performed whereas in Wangala only at one of the eleven weddings did the groom's father prefer to pay Rs. 12 to the *panchayat* fund. In both villages it was the poorest Peasant householders who preferred to pay cash rather than risk offending some important men at the distribution of *veelia*.

23. Procession of bridal pair

In both villages a procession of the bridal pair takes place along the customary route through all village streets in order to show off the newly married couple to all householders. In cases of inter-village marriages the procession also acts as an introduction of the new member of the village to all residents. In Wangala for four of the eleven weedings the groom's father hired a car to drive the couple through the four bumpy village streets ; two others hired a *tonga* (pony-drawn carriage) from Mandya and the remaining five arranged the procession on their own bullock carts. In Dalena the procession of the bridal couple was made on foot in all five Peasant weddings. In Wangala all the villagers came out of their houses to watch the bridal procession, which stopped at several houses and the bridal pair got down and was worshipped by the woman of the household. By contrast, in Dalena the procession was watched only by a few people and little interest was taken in it.

Third day : *Veelia divasa* (day of betel leaves and nuts distribution)

22*b*. *Veelia shastra*

In Wangala the *veelia shastra* takes place in the third day and occupies a prominant part in the wedding ceremony. The bride's father must contribute a small amount of betel leaves and nuts to the lot to be distributed to all wedding guests and Wangala Peasants. Neither the bride nor the groom are present ; instead there are two stools with plates containing their *muyee* to represent the bridal couple. The groom's father and his lineage elder both perform *puja* to the two little stools before *veelia* takes place. The bundles of betel leaves and nuts are usually prepared by the groom's agnates and friends and are then handed out by his lineage elder, who takes great care not to offend any of the distinguished wedding guests.

24. Departure of bridal pair for bride's home

Before the departure for the bride's home the couple give each other a bath ; the bride pours water over her groom and vice versa.

In Wangala usually a meat meal is given to the bride's party before it leaves. Since in Dalena the whole wedding procedure takes place on one day one meal is sufficient for the guests.

The couple walks to the village *Hanuman* and *Marichoudi* temples where they greet the respective deities and then they start the journey to the bride's home followed by members of the bride's party. The groom stays three days in the bride's home and then both of them return to his home again. He goes three times to his bride's home and stays three days each time and his bride comes back with him each time. During the last three days of the bride in the groom's home the couple give each other another *muyee snana* (exchange bath). Then the bride gives her groom the pounding stone and says : 'Watch our child, I must go out to do some work'. This, according to Peasant views, symbolizes the joint responsibility in the guarding and upbringing of their future children.

The bride then returns to her parental home where she stays until she reaches puberty.

III. *SOBANA* (CONSUMMATION CEREMONY)

25. Groom's procession to the bride's house

When the bride starts menstruating her village Washerman is despatched with some offerings of plantains, coconuts, betel leaves and nuts and the news to the groom's family. The girl is impure for sixteen days after which time she has a bath and is ready for her consummation ceremony which takes place in her own home.

The groom goes to the *Marichoudi* temple in the bride's village where he changes into a completely new set of clothing surrounded by his men friends and relatives.

At the other end of the *Marichoudi* temple are gathered several women, all relatives of the groom and each carrying a tray with gifts for the bride, for instance a sari and blouse, plantains, jaggery, betel leaves and nuts and so on. After long preparations the groom emerges to start the procession. Wangala grooms usually ride on a horse or pony hired from Mandya for the occasion while Dalena grooms go on foot. In both villages the procession is headed by a band hired specially for the ceremony. As with the band at weddings here too Wangala Peasants vie with each other who can employ biggest and best band, while Dalena Peasants hire the cheapest band they can get hold of. Behind the band comes the groom who is followed by his male relatives and friends who in turn are followed by his female relatives who carry the trays with the gifts for the bride on their heads. The procession passes through the whole village until it finally reaches the bride's house. Before the groom enters it the bride's sister performs *puja* over him. Then his real or classificatory brother breaks a ripe coconut on the entrance steps of the bride's home and the village Peasant boys all struggle for pieces of it. Afterwards the groom enters his bride's house where she is waiting for him all dressed up in her wedding outfit and deocrated with all her jewellery as well as with flowers. He walks over to her side and then both sit down on the *hasemane* against the wall facing east. All the gifts from the groom for the bride are placed in front of the couple.

26. *Akki shastra* (rice ritual)

A female agnate of the groom puts a vermilion spot on the couple's foreheads. Then she takes some rice into her hands and deposits some of it first on the groom's and then on the bride's knees, shoulders and head. Four more women perform this worship of the couple, two of whom are groom's agnates and to bride's agnates. During this ritual in Wangala Untouchable women, and in Dalena Peasant women, sing songs.

Following upon this the bride worships her groom and he in turn puts a vermilion mark on her forehead. Then betel leaves and nuts are distributed by the bride's father's lineage elder to all guests. The bride's household gives a feast for the groom's family and friends. The couple spends the first night together in the bride's home. The following day they depart for the groom's home. This is the end of the marriage cycle and the beginning of a new domestic unit.

Marriage Expenditure

As we have seen Wangala Peasant wedding are much more elaborate, being spread over three days, and more costly than Dalena weddings. In Wangala two of the weddings I attended were arranged by magnates, four by middle-farmers and five by the poorest Peasants. In Dalena one of the weddings I saw was arranged by a magnate, two by middle-farmers and two by the poorest Peasants. I am utilising three 'typical' wedding budgets for Wangala and Dalena to show the greater expenditure by Wangala Peasants and to illustrate how economic differentiation is reflected in wedding practices. The wedding budgets represent the total expenditure of the groom's household on all stages of the marriage cycle except for the consummation ceremony.

The bigger gulf between magnates and middle-farmers in Dalena is demonstrated by the difference in wedding expenditure by the groom's household ; the middle-farmer spent only 27% of the amount the magnate spent (see table 2). By contrast, in Wangala the middle-farmer spent as much as 74% of the magnate's wedding expenditure (see table 3). On

the other hand the gulf between middle-farmers and poorest Peasant is much greater in Wangala than in Dalena ; in Wangala the poorest Peasant spent only 58% of the amount the middle-farmer spent while in Dalena the corresponding percentage is 80%. In Wangala irrigation increased economic differentiation between landless, *i.e.*, the poorest Peasants and middle-farmers, but narrowed the gap between the latter and the magnates ; whereas Dalena's economic diversification created greater rewards for entrepreneurs and thereby increased the gulf between the magnates and middle-farmers.

TABLE 2

Dalena Peasant wedding expenses for three selected households

Items of Expenditure	*Magnate*		*Middle-farmer*		*Poor*	
	Rs.	%	Rs.	%	Rs.	%
Food	612	26	301	33	241	34
Clothing	454	18	102	12	125	17
Ornaments	1100	46	360	40	237	33
Functionaries	113	4	105	12	75	11
Misc.	123	6	27	3	34	5
Total	2402	100	895	100	712	100

TABLE 3

Wangala Peasant wedding expenses for three selected households

Items of Expenditure	*Magnate*		*Middle-farmer*		*Poor*	
	Rs.	%	Rs.	%	Rs.	%
Food	874	31	663	32	543	45
Clothing	367	13	890	42	205	17
Ornaments	1139	40	274	13	303	25
Functionaries	103	3	43	2	5	—
Misc.	383	13	240	11	162	13
Total	2866	100	2110	100	1218	100

Dalena's middle-farmer spent less than half the amount spent by his counterpart in Wangala. This considerably higher wedding expenditure by Wangala middle-farmers reflects their struggle for status. In Wangala irrigation opened up possibilities for economic mobility among middle-farmers. The resulting struggle for status expressed itself among other things in a competition over arranging the most elaborate weddings

for their sons. Wangala Peasants all derive their income from cultivation of their lands ; their economy has remained wholly rural and their interests and formalized social relations are all concentrated within their own village. A wedding is thus a display of conspicuous consumption to all people with whom Wangala Peasants have formalized social relations.

By contrast, Dalena Peasant's social relations are spread over a wide area including many different villages and even the town. Dalena factory workers have friends among Mandya's sugar factory employees who come from a number of different villages and even from Mandya itself ; Dalena farmers have established formalized social relations with Peasants and other caste members in the villages in which they own lands ; Dalena contractors have economic relations with the staff of the Public Works Department in Mandya as well as with labourers they employ from Dalena and other villages. Dalena's integration into the wider economy and society has thus considerably widened the circle of people among whom Dalena Peasants now wish to establish their prestige and status. To a Dalena Peasant it is more important to have a bicycle or a gold watch than to spend lavishly on a wedding feast. The range within which wedding expenditure operates as a criterion of prestige is largely limited to the village, whereas prestige accorded through ownership of a bicycle and gold watch operates within a much wider range of relations, including the town and one's fellow workers there. This explains why the total wedding expenditure of the middle-farmer in Dalena is much less than that of a Peasant in the same economic category in Wangala. For Wangala Peasants the village is the operative unit within which struggle for prestige takes place, whereas Dalena Peasants try to establish their status within a much wider circle of people who reside outside their own village.

Wedding expenditure is after all nothing but delayed consumption expenditure and Dalena Peasants have a different consumption pattern from Wangala Peasants. Dalena magnates and middle-farmers spend much more on their everyday clothes than do Wangala Peasants in the same economic category. In Wangala rich and poor alike work on the land and use

tattered cotton shirts and shorts for everyday wear. Here uniform occupation has prevented dress from becoming an important criterion of prestige except on special occasions such as weddings and village feasts. By contrast, the richer Dalena Peasants wear fine, clean shirts over a dhoti even on ordinary working days. They have to dress better in order to impress officials in the administration in Mandya whom they approach for contracts or farmers from neighbouring villages where they own land. The two Dalena men who are employed as clerks in Mandya wear western-style suits when they go to work. Thus the prestige accorded through dress arises out of the different economic activities performed by Dalena men. The greater current expenditure on clothes by the richer Dalena Peasants results in smaller amounts spent on clothes for a wedding. In Wangala the groom's father has to buy special sets of clothing for every member of his family, whereas in Dalena only the groom and the bride receive new clothes ; the other members of the family possess nice clothes already and do not need to be rigged out specially for the occasion. Furthermore, Wangala Peasants buy expensive western-style clothes for their sons to wear for the wedding which Dalena Peasants do not do. By contrast, Dalena Peasants invest more in jewellery which can be readily pawned and easily shown off to men and women from other villages and from the town.

It is interesting to note that in both villages the percentage of total wedding expenditure devoted to food declined with the increased wealth of the wedding household. This indicates that the richer the household the greater was the proportionate expenditure on clothes and ornaments, although in absolute amounts the richer households spent much more on food than the poorer in both villages. The wedding feast provided by Wangala Peasants was much more elaborate than the poorer in both villages. The wedding feast provided by Wangala Peasants was much more elaborate than that provided by Dalena Peasants. In Wangala Peasants paid Lingayat cooks to prepare the food for the wedding feast and make special delicacies, whereas in Dalena, except for the magnate's

household, the food was prepared by men and women of the wedding household and consisted only of rice and curry without any special dishes. Wangala's middle-farmers and poorest Peasants spent more than twice the amount on food spent by their appropriate counterparts in Dalena. The three-day weddings held in Wangala involve the wedding household in much greater expenditure on food : the bride's party has to be fed for three days instead of only for one day as in Dalena.

In both villages the amounts paid to Functionaries increased with the wealth of the wedding household, though in Dalena the amounts were considerably higher than in Wangala. Yet this does not indicate a greater employment of their services at Dalena Peasant weddings ; rather it shows the higher cost of Functionary services to Dalena Peasants as compared with Wangala Peasants. Most of Wangala's Functionaries' services are paid in kind by rice or ragi, while most Dalena Peasants pay their Functionaries in cash. In Wangala the hereditary relations between Peasants and other castes still persist and therefore payment for the services of Functionaries is, according to custom, in kind rather than in cash. Thus the higher expenditure on Functionaries at Dalena Peasant weddings reflects a breakdown of the traditional system of caste inter-dependence and the emergence of depersonalized purely economic relations between Peasants and other castes.

The greater absolute and relative amounts Wangala Peasants spent on miscellaneous items illustrate their greater ingenuity in introducing novel items into their wedding procedure, such as for instance the hire of a car or jeep for the procession of the bridal pair through the village streets or the hire of an expensive city band to herald the various wedding processions. The absolute amount devoted to miscellaneous items increased with the wealth of the wedding household : the middle-farmer spent 63% and the poorest only 42% of the amount spent by the magnate in Wangala. By contrast, in Dalena the middle-farmer spent only 22% and the poorest 27% of the amount devoted by the magnate to miscellaneous items. This is another illustration of the big gulf that exists between magnates and middle-farmers in Dalena where the

magnates are the chief entrepreneurs. The one magnate wedding in Dalena was in the household of the chief money-lender in the village, who attempted to use the occasion to assert his social status in the village. Normally he is regarded as a mean and greedy man, but for the wedding of his son he was prepared to spare no expense. He hired Lingayat cooks to prepare special delicacies for a feast to which he hoped all villagers would throng ; he had his house splendidly decorated and rose water sprinkled around to give it a pleasant aroma. Alas, only members of his own lineage, Peasants from other villages and Functionarias attended the feast, while due to factional opposition all other Dalena Peasants boycotted it. Much of the food was left over and eventually given to Untouchables. The magnate bitterly complained of the lack of civility on the part of Peasants in his village and swore that he would never again go to such trouble and expense to provide hospitality. Nevertheless, his efforts had not failed to leave their mark, for in spite of their boycott everybody in Dalena spoke for days about all the things the magnate had prepared for his son's wedding. Yet even the wedding of the richest magnate in Dalena, who is much wealtheir than any of Wangala's magnates, involved less expense than that of the Wangala magnate. Compared with other weddings in Dalena that of the magnate was most elaborate, but compared with the weddings I attended in Wangala the Dalena's magnate wedding was not outstanding ; apart from specially prepared food it included no novel item ; there was no car to take the bridal pair in procession round the village, nor a very elaborate band to accompany them. Despite Dalena's greater integration into the wider economy the impact of the town is less noticeable at Peasant weddings than in Wangala. The comparative 'dullness' of the wedding of Dalena's magnate can be easily explained by reference to weddings of middle-farmers in the village. Even the middle-farmers conducted only a one-day wedding in Dalena and they spent less on it than the poorest Peasants in Wangala. In Wangala economic differentiation since irrigation is most intense within the group of middle-farmers. This finds expression in the way a middle-

farmer celebrates a wedding in his household and puts pressure on magnates to compete with middle-farmers. All these Wangala middle-farmers derive their income from their estates. By contrast, many of the middle-farmers in Dalena derive the major part of their income from sources other than agriculture and from outside their own village. Consequently struggle for status among middle-farmers in Dalena is differently expressed. Although there has been a marked increase in the wedding expenditure in both villages since the advent of irrigation in the area, the increase has been much greater in Wangala than in Dalena.

Discussion

Although Dalena Peasants on the whole perform very much the same rituals at their weddings as Wangala Peasants, there are three striking differences between Peasant weddings in these two villages.

Firstly, Wangala Peasant weddings still symbolize the customary interdependence of castes : the hereditary Untouchable client of the Peasant helps to prepare the groom's house for the wedding and his womenfolk come and sing songs during the various wedding rituals ; the village Potter supplies new pots for the *misel neeru shastra* ; the Goldsmith makes up the jewellery for the bride and puts it on her ; the Brahmin priest performs the actual wedding ritual ; the Temple Priest officiates at the temple ; the Barber shaves the groom and puts on his turban ; the Washerman carries the *devaru pettige*. The presistence of a wholly rural economy in Wangala is responsible for the continued existence of intercaste dependence symbolized at Peasant weddings. By contrast, Dalena's diversification and integration into the wider economy has led to the disappearance of hereditary relations between Peasant households and most other castes. This is demonstrated at weddings in the substitution of cash paid or self-provided services for those previously done by village craftsmen against payment in kind. Nowadays the Basketmaker is hired to make mats for the canopy erected in front of the wedding household where previously the Untouchabte *halemaga* plaited plantain

leaves into a roof cover. Pots are bought in Mandya and are not provided by the village Potter. Jewellery too is no longer made by the village Goldsmith, but is usually bought in town. Peasant women sing songs instead of Untouchable women and the Peasant acolyte performes the function of the Temple Priest. Sometimes the latter officiates in place of the Brahmin priest. Only the village Barber and Washerman with whom Peasants still have hereditary relations perform their customary services at Peasant weddings. Thus we see that only where hereditary economic relations still exist between Peasants and Functionaries do the latter perform their customary services at Peasant weddings.

Secondly, in Wangala women take a much more prominent part in arranging marriages and are present at all rituals, whereas in Dalena men find brides for their sons. This is in line with the prestige attached by Wangala men to relieving their wives from work on their lands, which is a sign of an integrated society. For the sort of life a man provides for his wife can be regarded as a matter of prestige only by those who observe it. By contrast, Dalena Peasants' manifold links with the regional economy have increased the range of people among whom they seek to establish their status. Therefore, quite apart from the economic necessity of Dalena wives still working their husbands' dry lands, it would yield them prestige only among their fellow villagers if they were to relieve their wives from agricultural labour. Thus Dalena women still occupy the customary subordinate position while their Wangala sister have become much more independent and occupy more responsible positions in society.

Thirdly, Wangala Peasants spend a lot more on their weddings than Dalena Peasants. I have argued that this difference in wedding expendiiure demonstrates the difference between a closely integrated rural society and a diversified economy. In conclusion I offer the hypothesis that whenever economic development leaves economic roles and relations practically unchanged, as it did in Wangala, greater stress will be laid on the re-affirmation of the traditional social structure and more money will be spent on weddings than if economic

development takes the form of diversification and greater integration into the wider economy, as it did in Dalena.

NOTES

1. The names of castes are given in English and printed with a capital initial letter. For example Peasant is a man of that caste, a peasant is a farmer.
2. The research on which this paper is based was conducted in 1954-56 supported by a grant from the Rockefeller Foundation whom I wish to thank.
3. I have changed the names of the two villages slightly, using the initial letter 'W' and 'D' to help the reader bear in mind which is the wet village and which the dry.
4. Population figures are based on my own census taken in Wangala in 1954 and in Dalena's in 1955.
5. I have divided Wangala's and Dalena's population into three economic categories ; namely magnates, middle-farmers and poor, according to the size of landholding and other sources of income weighted by the size of the household. In Wangala magnates formed 3%, middle-farmers 57% and the poor represent 40% of the village population, whereas in Dalena the percentages are 5%, 19% and 76% respectively. The much greater proportion of Dalena's population in the poor section throws into relief the much greater economic differentiation in the latter village.
6. One rupee is worth about 21 American cents.
7. For an elaboration of the concept of patron-client relations by Peasants see Srinivas 1955b.
8. The collective term Functionsry caste is used to denote all the servicing castes.
9. A bath consists of hot or cold water being poured over the body while the persons is fully dressed and can be done in full view of others.

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THE APPROACH TO THE PROBLEM OF POPULATION AND TO ITS SOLUTION IN INDIA

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RECENTLY the United Nations report on the population projection, has been published. The gloomy future of the population explosion has set thinking almost all economists, demographers and sociologists all over the world, as to how this serious problem might be tackled. It is now quite clear that this overgrowth of population offers a challenge to all prospective economic development. Modern scientific and industrial development has begun with the optimistic hope of providing an adequate supply of the necessities of life to all persons, but such progress implies that much larger populations would come into existence. The improbable assumption regarding the course of population growth, acts as a single deterrent to all consistent long-range plans. From the above facts it becomes evident that unless some method is devised to curb down the high fertility rate, the projected per capita supply of food and services will inevitably begin to move downwards. To achieve the result, the approach to the problem and also the proper approach to the solution, requires careful considerations.

The Government of India, introduced the Five-Year Plans with the object of raising the standard of living. The second Five Year plan is nearing its close. The general state of affairs has been improved, steel plants have been erected and have already started production and or increased their output several times. Cement factories, fertilizer plants and other heavy industries have been constructed ; river dams have been

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raised and numerous canals have been dug for facilitating irrigation. Hydro-electric and thermal plants have been started to increase the electric supply for industry and household use. Roads and communications and communication engineering projects have received proper attention and medical aids and hospital facilities have been extended so much so that public health measures have already been extended even to remote villages. The general state of affairs has been so much improved that even the most adverse critics cannot but praise the efforts and achievements of the Government.

No doubt, the national income has considerably increased, but the per capita income has increased only very negligibly. The list of unemployed is increasing every year, the prices of food and other commodity goods are increasing to a sky-height beyond the reach of the ordinary citizens of India and consequently unrest and political demonstrations have become daily affairs. Inflation in the money market has become too apparent. Every year a large fractions of the revenue has to be spent in importing food-grains from abroad, restricting the import of even the most important and urgent research chemicals and other implements which are not produced in India. This state of affairs is due to an inadvertent planning. The overzealous authorities, eager to bring about some magic effect, pressed for the development in directions of their particular interest, and neglected the more important issue requiring greatest attention, oblivious of the fact that an increase of population might frustrate all their attempts. The problem of population growth was neglected or rather treated half heartedly by sanctioning a negligibly small amount. In the second Five-year plan, the Government of India sanctioned five crores of rupees for this mighty problem, but no proper arrangement was made to define the proper approach for tackling such a problem. A financial grant, by itself, is not enough.

In this connection Leibenstein's[1,2] thesis is worth consideration. According to his mathematical deduction, the subsistence economy in a state of equilibrium, is remarkably steady. Efforts to raise the level of living, bring into existence a

variety of income depressing forces, including a reduction in the mortality rate. Thus some critical minimum effort is needed to displace society in question from this state and set it on the path of economic development. Any effort less than the critical minimum, would lead to a somewhat larger society living at subsistence or even lower level.

Winfield[3] (1948) advised the Chinese Government to reverse the order for the proposal of introduction of western medicine. Instead of trying to save most of the lives of all, only priority was to be given for saving the lives of productive capacities and lives of adult children. Unless family control measure is properly introduced the introduction of health schemes, sanitary engineering and public health measures should be held in abeyance. This will clearly suggest the primary condition necessary for the success of economic development.

Food Production

Disquieting reports are published now and then suggesting that India has enough land to be brought under the plough, and that improved method of cultivation with proper manures and improved seeds etc. might yield enough crop to solve the food problem of India. It is true that food production might be enhanced even 50% or more with proper planning, but to achieve that it would require several years and by that time the population of India would reach unmanageable height. During the 1951 census, the population figure was 36.13 crores and in the coming 1961 census it is estimated, accerding to the sample survey, to go up to 43 crores. Food production in India depends largely on the rains and there are chances of failure of crops due to drought or flood. India is most densely populated, and if more and more of land is brought under the plough, there might be dearth of fodder for cattle. Some authorities recommend artificial synthetic food, but they do not take into consideration the production of raw materials and also the manufacturing cost. Some authorities even go far as to recommend utilization of protein from grass or wild foliage. Apart from the cost of extraction, there is risk of competition with the cattle population bringing about annihila-

tion for both. This can never be the proper approach to the problem. Food production should be enhanced by all possible means, but at the same time, the control of population growth should receive priority.

Industrialization

There is no sense in decrying the present industrial progress in India where it is of utmost importance for the advancement of India and for the utilization of the vast raw resources. But at the same time it should not be overlooked that even in the factory, control of populatiou growth should require first preference. The primary outlook in industry is maximum output at a minimum cost, so that the shareholders might get a reasonable dividend. This depends in turn on minimum loss of man-hours and maximum output of a body of satisfied labourers. For this purpose, the management has to arrange for housing, health, maternity and child welfare and other amenities. If the family size of the workers increases rapidly it would bring an additional burden on the output cost, bringing down the shareholders' dividend. For the industrialist, the restriction of the family size of the working hands within a reasonable limit, is of the greatest importance for the progress of industry.

Commodity Goods

Nothing could be more apparent in such cases where the demand always surpasses the supply, however it might be augmented. Unless the rise in the population is checked there would be greater rise in the price of such goods.

Employment Problem

There is nothing more inevitable than the progressive rise in the figure of the unemployed, in spite of the numerous outlet for employment in these newly instituted industrial and other developmental projects. The Government of India's own figure will corroborate that after each Five-Year plan, the outstanding number of unemployed people will surpass the previous figures. For the ultimate success in the handling of the unemployment

problem, the control of population growth requires primary consideration.

From the above facts, it becomes evident that the outlook should be changed and the control of population overgrowth or in other words, family planning arrangement which is the key-note for the success of the Five-Year plans for raising the standard of living in India, should receive primary preference and should be tackled with all seriousness.

An Approach towards Solution

The approach to the population problem has been discussed from different angles. The next item requiring proper consideration, lies in the approach to the solution of such a great problem. Here again divergent reports, even by authorities, make them more complicated. Some authorities suggested so far as to impose even drastic family planning measures in the rural areas only, where the people are rather less useful than the urban educated and cultural population. The educated urban population can provide for future needs in different employments of higher technical level. The reduction in the birth rate in such cases would create dearth of useful hands in the future. The authorities perhaps have not sufficiently realized that in a majority of cases the highly educated and skilled personalities often came from unknown villages. In the estimate of other authorities, the birth rate in the urban areas is greater than that of the rural ones, and necessary efforts should be concentrated in these areas. These authorities unsuspectingly have not been able to estimate that more than 70% of the total population in India live in villages. Both the judgements are coloured and do not represent the total perspective of the whole problem. Uniform effort should be exerted for family planning both in the urban and rural areas for an all-round success in this direction.

Another and most important factor requires to be settled in the beginning is the attitude towards the result. In the opinion of some, there should be 100% reduction in the pregnancy rate. The queer argument offered was, that most of the population in India might not accept family planning

method or they might not be approached ; so instead if there could be achieved highest number reduction in the small available group, the reduction of total birth rate in India could be reasonable. Or in other words, penalize a small available group to get at the end result. The real approach to the solution should be the introduction of a cheap and easily acceptable and workable method throughout the length and breadth of India to attain an uniform success of at least 50%.

50% has been categorically mentioned with the idea that here in India the social and economic condition is such that this should be the ideal objective to be attained. The attitude[4] is rather good in India, even in the villages but the prevention of child birth by any means available, and to the extent of 100%, would not fail to give rise to serious repercussion. In a group of microscopic minority, compared with the vast population in India, this might be the background of family planning, namely a 100% success. In India, the very concept of premarital and postmarital enterprizes are rather abhorred. Prevention of the birth of illegitimate children, might be the problem elsewhere but never in India. It is rather regrettable that we have become prone to copy others. No donbt we have lost the power of taking initiative and original thinking and are eager in copying others in every sphere. For the developmental plan, in the beginning, it is helpful to immitate in certain sections for quick progress but the very idea of social reconstruction in a foreign cast would surely be a suicidal policy. The control of the population explosion is an world-wide problem but still the approach to the solution of the problem, should be fitted to the individual social and economic conditions of the nation and this is sure to vary from place to place. Moreover in the attempt of controlling Nature, a 100% success means that Nature would find its revenge sometimes or other. The success might be magic in the beginning but the serious outcome in the long run would find ample compensation, a 50% success means reasonable understanding with Nature without any apprehension of future revenge. Although individual guarantee might not be possible yet a 50% reduction in the birth rate would go a long way in

the solution of the population problem in India. Further a border-line position makes room to swing to either side in cases of emergency.

Surgical Approach

For the solution of the pressing problem of population, there are different approaches and it rests on the Government of India as well as the people, to decide what should be the right approach suited to the economic and social condition of the people. It would be grossly unwise if it is decided to follow what other countries have adopted with reasonable success. For instance, Japan has started abortion and has succeed in bringing down the birth rate by at least 50% by conducting 2.2 million abortion every year. There the average rate of abortion was reported, in a personal communication, as 3-5 abortion per woman per year and in one case, in one of the officer's report, 7 abortions in one year. But it should not be ignored that even in Japan this had not been sanctioned by law. Only, the Government of Japan, realizing the impending position created by the overwhelming increase in population, temporarily kept their eyes closed. This, of course, is a short-time policy and shows only one side of the picture. The other side of the picture, although not reported, still seems to be of vital importance for Japan. Japan had bitter experiences in Hiroshima and Nagasaki. Japan also must have experienced the results of the fallout caused by the trial explosions of atomic weapons in the Pacific islands. So it seems that just to save the nation from the catastrophy of genetic abnormalities, Japan had to take recourse to such drastic measure. But whatever it might be, Nature can upset all human calculations and no one knows what greater evil might emerge out of such drastic steps taken in order to avert one form of danger.

What is true for one country cannot always be true for another country. What has been possible for Japan need not necessarily be possible for India. The population of Japan is only a fraction of that of India. The literacy level, the per capita income of Japan is much higher compared to that of India. In all another aspects, Japan is an advanced country

and the social condition is distinctly different. The possibility of surgical measures such as abortion, ligation and vasectomy in India, can be ruled out. Such surgical measures conducted here and there in some big cities with the help of experts and at great cost, could be of no use in the solution of the population problem of India. It is beyond the possibility on the part of the Government of India to provide for such measures throughout India. Moreover, there is a strong likelihood that these measures would not be accepted or even tolerated by the people of India in general. In addition, the socio-psychological changes which might ensue in the majority of cases also require serious consideration[5].

Mechanical Appliances

This method is successful no doubt in some cases and has been the practice for long years, but still the pioneers of family planning even in advanced countries, are convinced that they cannot be of much significant use in the solution of the great population problem. Difficulties of such mechanical measures lie in the fact that the first experience always counts. If subsequently enjoined for its practice, it becomes difficult for both the parties to submit. In spite of long years of propaganda and use even in advanced countries, population figures there are on the ascent instead of there being any sign of decline. The illiterate village population in India, constituting 70% or more of the total population, contribute the largest number of births even under most adverse circumstances. For them such measure can never be acceptable. Similarly the rhythmic method, although approved by the Roman Catholic Church, has already been abandoned by the Government of India, on account of its inefficacy.

Oral contraceptive

Dr. Conant, of the Harvard University, now an Emeritus Professor remarked on the eve of his retirement, that the future of society was rather gloomy due to excessive population growth throughout the world. Until some cheap and harmless oral contraceptive could be developed there was no

possibility of the solution of this problem. But at the same time, he remarked that he was afraid that it would take another hundred years to develop this. Unfortunately he was not cognisant of the fact that such an oral contraceptive had already been developed in India by the author from the common field pea. The active principle had already been isolated and synthesized. A preliminary note[6] was published during October 1949, and Mrs. Margaret Sanger, the pioneer of this movement, was presented with a copy of the article. She at once realized the possibility. Prior to that, no one had ever thought of the practical possibility of oral contraceptive. It was already known that oestrogen and progesterone were antagonistic in their effect and administration of excess of any one of them could prevent conception. Also, testicular extract, such as testosterone, was known to counteract the effect of female sex hormone and produce a contraceptive effect. These hormones are very potent biological substances and the sex apparatus is a very delicate one. They were used as correctives and never recommended for persistent use through fear of upsetting the hormone-balance of the system. Persistent prevention of ovulation might presumably lead to serious consequences in the long run. Excessive oestrogen was known to act as carcinogen. The steriod hormones consist of cholesterol and this cholesterol is also the basis of carcinogens. Now a days, even liquid paraffin, a hydrocarbon, is seldom recommended for laxative purpose, through fear of inducing carcinom in susceptible subjects. For the same reason, tar ointments have been withdrawn from the market.

Indigenous Herbs

Prior to the announcement of m-xylohydroquinone, the synthetic active principle of common field pea, as a cheap harmless oral contraceptive *lithosperma rudarale* was known to inhibit gonadotrophic activity[7, 8]. But the idea of using it as oral contraceptive was rather remote. After the publications of detailed results with the oil of pea, several scientists [9, 10] devoted themselves to working out the possibility with *lithosperma rudarale* and *lithosperma officianale*, for the

development of some oral contraceptive. Unfortunately, in spite of several years of experimentation, the active principle has not been isolated. A laboratory was started in London under Dr. de Laszlo and more than 60 herbs were collected from different parts of the world[11]. After screening, six of them were found to have some effect, but the active principle has not been isolated in any case uptil now.

Steriod Hormones

Since then, one group of scientists in U.S.A. reopened the chapter of steroid hormones which could be synthesized from cholesterol. Testosterone, the male testicular hormone, antagonizes female sex hormone and prevent ovulation by the inhibiting of pituitary gonadotrophin. This factor was utilized and a more effective nor-cthisterone was developed. Similarly, several such steroid compounds were developed such as enovid, nilevar, delalutrin etc.[12,13,14,15]. Zaffaroni[16], a chemist of Mexico, developed several such compounds and studied their comparative effects. Human trial was conducted on Puota-Rican women with unifrom success. There are side-effects such as nausea, vomiting, headache, giddiness, etc. but the most troublesome one is break-through bleeding. The administration is for 20 days in each cycle and requires constant medical supervision. The cost is prohibitive, namely, 5 dollars per month, which alone rules out its possibility as an oral contraceptive in India. Further, these drugs are not excreted in the urine in the same manner as progesterone is excreted as pregnandiol. This suggests that the system must be storing the metabolic product in some out of the way corner, which eventually might give rise to future difficulties after some years of use[17].

Immunological method of approach

Maddock[18] *et al* (1953) developed some antigen from semen. When injected, it produced anti-hormone to interfere with the action of gonadotrophin. This effect was not dependable. Freund[19] (1955) made protein-free testicular extract. When injected into male guinea pig, the production and passage of

spermatozoa was interfered with. This was possible in guinea pigs only.

Anti-leukaemic agent

These are chemicals known as alkylating agents. These chemicals combine with the nucleic acid of the chromosomes to bring about their destruction. These are in general toxic and bring about contraceptive effect by destroying the germ cells. In failure cases, the offspring was usually found deformed. Such compounds are TEM[20], TEPA, aminopterine marcaptopurine, antifollic acid etc. Thiersch[21, 22] worked on these chemicals.

Some newly developed compounds used for other purposes

Nelson[23] and others tried to utilize, furadantin and furadoxyl notroturazone[24] usually used as an urinary antiseptic. In smaller therapeutic doses, it produced no effect but was effective in diminishing spermatogenesis in larger doses, when it becomes toxic to the system. Hypotensil drugs and halucinogens, etc. such as resarpin, chloropromazine, chlorphenothiazine and others, were tried without any appreciable result.

Simple compounds like m-xylohydroquinone

Recent trend seems to be directed to the development of simple compounds which might have contraceptive effect some way or other. Dodds' stilbestrol is an example of non-steroid simple oestrogen. Emmens and Cox[25] substituted two methyl groups in place of two ethyl ones in stilbestrol. This produced a change in their behaviour, being inhibitor of oestrogen. Unfortunately it was effective in smaller doses but in higher doses it became pro-oestrogen. Also it has to be administered intravaginally simultaneously with oestrogen. This limited its use. Shunyo[26] of Japan produced diphenylsulphide and diphenyl disulphide but these were like stilbestrol in action. Cumestrol[27] was oestrogenic in activity. Hausher *et al*[28] produced p-hydroxy propiophenol and found that it inihibited gonadotrophic secretion. Levis *et al*[29] developed 2 amino 5

nitro thiozol which delayed spermatogenesis and sex maturation in the turkey. Segal and Nelson produced[30] MER, which prevented implantation in rats. Rothschild[31] developed p-trianisylchlorethane but this was found to be oestrogenic in action. Scandinavian[32] scientists developed compounds where phenyl rings were attached to the six carbon chain. The positions of the phenyl rings were varied from place to place and these compounds were found to inhibit oestrogen.

In the author's laboratory, many such compounds have already been developed. In this case the xylenols were fused together at the nucleus or linked together with methane[33], ethane and other linkages. Some of these compounds have already been tested in rats[34] and have been found to inhibit gonadotrophic activity as well as the effect of oestrogen. These compounds are very simple and easy to prepare and cost is negligible. They are highly stable.

M-xylohydroquinone, the synthetic oral contraceptive, originally developed from common field pea, was tried on 727 human females for two years[35,36,37]. The reduction from their existing pregnancy rate, was very reasonable, more than 60%. There was no toxic effect, no abortifacient action, no deliterious effect in the child born in failure cases and it did not produce permanent sterility. The cost is less than that of an aspirin tablet and the administration is only twice every month. The Government of India carried out a second trial under the aegis of the All-India Institute of Hygiene & Public Health, Calcutta. They compared the results of the treatment group with that of the control group, receiving placibo. In this trial the reduction was 60% in the pregnancy rate compared to that of the control group. The previous observations of the author were fully endorsed. In the report it was stated that even with all allowances, a 50% reduction might be assured.

From the practical point of view, this approach seems more reasonable and suited to India and other underdeveloped countries. The introduction of m-xylohydroquinone among village populations in some areas has already been started with promising result. The Government of India, if they so desire,

might arrange the manufacture of it on their own initiative or in conjunction with I. C. I. or other organization. The starting chemical, 2 : 6 xylenol can be easily produced in India as a bye-product of coal-tar distillation. Approach to the people might be easily effected through cinema, radio, public lectures etc. Distribution of medicine and propaganda could be effected through special units appointed district-wise, in the line of the anti-malaria units. It is hoped that in near future some more suitable, effective, harmless and cheaper oral contraceptive might be developed. But a bird in hand is worth two in the bush. If such an oral contraceptive becomes avilable it will not be difficult to switch on to the other. In the meantime, the ground should be prepared by propaganda and practice. All these depend on the policy to be adopted by the Government of India.

Sociological Approach

This method of approach has been discussed previously[38]. The task is rather difficult and will take long years to produce some appreciable effect. Only it might be said that if the marriagable age of girls be extended beyond 20 by law which is properly enforced throughout the country, there is every possibility that the birth-rate might be sufficiently reduced. It was observed in the author's own trial that pregnancy rate is highest, 97 per 100 couples per year, in the age group of 15 to 20 and it suddenly drops to 67 in the next age group of 21 to 25.

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MISCELLANEOUS NOTES

THE AULGERIA EXPERIMENT

My attention has been drawn to an article published in *Man in India* Vol. 39, No. 3 contributed by Shri R. Gupta, Deputy Inspector General of Police, Northern Range, West Bengal. I regret I did not have the chance to see it earlier. I am grateful to Shri Gupta for there would have been no reclamation work at Aulgeria without his active sympathy and co-operation. I am grateful also for the criticism, as it gives me an opportunity to clear up some ideas evidently shared by friends.

Nothing need be said on the first five sections of the article ; these contain thoughts and ideas common to all who surveyed the situation in 1953-54. But there are certain mis-statements of facts and consequent observations caused no doubt by wrong information which may be pointed out. If the impact of the work seen in 1954 wore off, the reason has to be found. On Shri Gupta's own showing, the theft figures had gone down from 169 to 99 in 1957, not 'gone up'. The livestock has not 'disappeared', but there is a small dairy, some poultry (not 'eaten-up'), and also arrangement for goat-rearing. Centralized activity and co-operative society have to jog on for some time ; if the co-operative society has to survive the onslaught of exploiters always on the prowl. We must plead guilty of inadequacy of supervision, because there can never be too much of it ; but the 'specific mistakes' pointed out by Shri Gupta require a little scrutiny.

(1) Collection of forest produce such as medicinal herbs, firewood, roots and fruits for consumption or local sale has always been encouraged. But circumstances have changed. Restrictions have been imposed by the Forest Department, and the Lodhas have to secure permits for the collection. Individual collection might be difficult, and co-operative reorganization is a desirable solution. Even that cannot succeed without

marketing facilities, or some protection from the State in this particular regard. It is not a fact that the 'the original proposals to provide livelihood through collection of medicinal herbs, rearing silkworms and bee-keeping were completely overlooked'. After some exploration it was found, in consultation with the District authorities, that it was advisable to drop these schemes. Instead, some money has been invested in a rope-making machine.

(2) The cultural aspect has not been ignored. It could not be. The 'caste Hindu social worker' saw to it that the Aulgeria Lodhas were provided with *madals* and *dhumsis*, and they observe Bandana and other festivals with a delight and enthusiasm never known before, and jointly with local Mahatos.

(3) It is not correct to say that the Lodhas are kept in isolation or in an 'American-Indian type of reservation'. At Aulgeria one may now see the growth of a community of representatives from Mahatos, Lodhas, Santals and Baghals. They sit together to discuss local problems, settle disputes, prevent social injustice, devise ways and means to control crimes and resist all sorts of corruption. Two nominees of this panchayat have been returned unopposed to the Gram-panchayat, one a Mahato and the other a Lodha. We invite our friends to attend the Bandana festival in our colony next year and meet our popular panchayat to realize how the situation has not been fairly represented.

Comparisons do not help. Shri Gupta himself has stated that 'the Lodhas of Kesiari and Narayangarh were in different stages of transition' (p. 214). The transition is being phased in connection with the Aulgeria Lodhas, admittedly 'a representative lot of notoriety' still, none of the veterans, the first group of 26 families for whose reclamation the scheme was originally sanctioned, was in prison. It may please Shri Gupta to know that Budhan has been out of it all these years (p. 217).

It was expected that Shri Gupta would know the situation in its entirety. Seeing the lot of the 26 families which were settled first, a group of 15 families of Bagjhapa notoriety was forced to seek asylum at Aulgeria, under the idea that if they

turned over a new leaf they might enjoy protection under the Harijan Sevak Sangh. Apparently this was not liked in some quarter, and the unfortunate Bagjhapa Lodhas—our second group—were prosecuted again and again, and we had to arrange for their defence. They were acquitted but again prosecuted, and again acquitted. All this is on record. Our attitude has been one of helping them to settle down as steady citizens of free India, and we believe we were not wrong. Six of these 15 families 'disappeared', that is, left the establishment. Their places were taken up by others.

Shri Nirmal Chandra Ghosh from Santigarh has lately sent the informatian that other Sabars have not yet come in place of those who have left, but they have been keeping contact with the colony and express their desire to come, but none have been enrolled as members of the colony.

We have now a basic school at Aulgeria : we pin our faith on the future. In the meantime we must work on, and of course bow to the verdict of the anthropologist and the sociologist and the social worker as to the nature of our 'failure' and its cause.

P. R. Sen

The Editor has very kindly shown me a note by Professor P. R. Sen on Aulgeria in which it is contended that my observation of things there has been in some regards faulty. The impressions I recorded in this Journal sometime ago about the Experiment were formed after a personal visit, on-the-spot discussion and observation. On the other hand, Professor Sen also has had opportunities for frequent visits to Aulgeria and personal supervision which one doubts not, have been availed of. Suffice however it to say that I shall be happy to be proved wrong about Aulgeria by its future development. Controversy is profitless, for what is involved here is not an academic issue but a practical experiment relating to the future of a tribe. If the work there started under the guidance and inspiration of Professor Sen and with which I myself was associated in the beginning in a humble capacity, achieves success (which is yet to be seen), we should all rejoice.

R. K. Gupta

BOOK REVIEWS

OBOK—A study of Social Structure in Eurasia. *By Elizabeth E. Bacon. Pp. XV+235, 1958. Wenner-Gren Foundation, New York. Price $4.00.*

Obok is the name proposed for a type of structure which closely resembles what Africanists refer to as the 'segmented lineage' system. The term is of Mongol origin, and the structure apparently has a wide distribution. The author first came upon it among the Turko-Mongol Kazaks, and its existence was confirmed as a result of field work among the Hazara Mongols of Afganistan. The analysis of secondary sources later on led the author to conclude that similar structures existed formerly in Europe as well as in other parts of Asia.

The descriptive term 'tribal genealogical' has been used by the author to designate the *obok* type of structure. In the *obok* system the framework of tribal social structure is provided by genealogical ties, actual or putative. Territorial segments correspond to genealogical segments, and these are often of a corporate nature. Among the Hazaras 'members of lineages, subsections, and usually sections believed themselves to be descended from a common ancestor. Beyond this there appears to be a pattern which favours the belief that all groups, even at the subtribal, tribal, and intertribal level had a common progenitor' (pp. 17-18). The names of founders at the tribal, and even higher levels are often remembered.

The Hazara tribes are divided into subtribes, these into subsections and lineages. The segments at the different levels are not designated by different terms, there being only word in use. Thus, among the Jaghuri tribe of the Hazarajat the term *alaghe* refers in different contexts to lineage, section and tribe. The use of a single term for groups of different levels is to be explained in two ways. Firstly, such groups have similar functions in many important respects. Secondly, segments of a lower order are continuously transformed into higher order groups by a process of genealogical expansion. Thus, a lineage might, in the course of time, become a tribe, its various branches attaining the position of sub-tribes. Substantial additions from outside do, of course, play an important part in the emergence of new tribes, subtribes and sections.

The picture that we get of Hazara social organization, though suggestive and interesting in a number of ways, suffers from a certain lack of depth. This, as the author herself indicates, is due to the inadequacy of her field work. Brief visits, lasting usually a couple of weeks were paid to some of the tribes of the Hazarajat. Besides this, most of the information was collected from exiles living in Meshed and Quetta. The analysis of tribal segmentation leaves much to be desired. One should like to know more about the nature of corporate functions pertaining to the groups at each level in the political, economic, and ritual spheres. One should also like to know if anything similar to the phenomena of *fission* and *fusion*, and the *balanced opposition of segments* so familiar in African segmentary systems also exists here.

The cultural relatives of the Hazara Mongols, namely, the Medieval Mongols, the Kazaks, and the various sub-divisions of the Modern Mongols are shown to have, or have had an *obok* type of structure. The *obok* structure is further traced in South-West Asia, and also in Early Europe, among the Romans, the Gauls, the Early Germans, and so on. Finally, the Chinese are shown to have possessed a structure closely resembling the *obok*. Needless to say, this sweeping comparative study is superficial by its very nature. All kinds of indicators are used for tracing the existence of *obok*, and one is left with the feeling that hardly any tribe is devoid of it. A scientific concept, if it is to be of value, requires to be more rigourously defined.

The author concludes by comparing *obok* with clan, thus attempting to bring out the distinctive features of the former. In the clan system, the corporate groups are mutually exclusive. If an individual is a member of clan X, it follows that he is *not* a member of the other clans in the tribe. Not so, in the *obok* structure where one is a member of several groups at the same time. The point which is missed, however, is that these several groups belong to different levels. One cannot in the *obok* system, any more than in a clan system, be a member of several groups of the same level. The author seems to assume that *obok* and clan structures stand in opposition to each other. A reference to African material would convince her that clans and a segmentary structure can, and do, co-exist within the same tribal system.

Andre Beteille

Socialism in Southern Asia. *By Saul Rose, Issued under the auspieces of the Royal Institute of International Affairs and Published by Oxford University Press, 1959. Price Rs. 17.50.*

This book is an authentic analysis of contemporary politics pursuing democratic Socialist aims in Southern Asia. The countries include India, Pakistan, Nepal, Ceylon, Burma, Indonesia, Thailand, Cambodia, Vietnam, Malaya and Singapore and in addition there are two separate chapters, one for the first and the other for the second Asian socialist conferences.

Admirably informed the author has treated *in extenso* the history of development and spread of the Socialist parties in those countries. Light has been shed on many events and facts which were in darkness heretobefore. In doing this the author has disclosed many inner stories of the different Socialist parties and their leaders and has drawn upon unpublished materials, not ordinarily available. For the political scientist the book provides an absorbing and interesting study of democratic socialism in Southern Asia as distinguished from Communism. The book will remain as a good reference book for a student of socialist studies and particularly for a student of this region where socialism is the predominat ideology.

The author has shown how ideological starting point for the Socialist movement in Southern Asia being Marxist progressively abandoned Marxist Orthodoxy since independence and began to give less importance to the role of the State and put more emphasis on the need for decentralization and local autonomy for fear of democracy which was regarded as essential to a Socialist society being smothered by State bureaucracy. This was primarily the contention of the Indian leader Jay Prokash Narayan which the author adds in the end of this treatise. They are—

'(1) that a political system based on a class struggle or conflict of interests cannot create a socialist society which is essentially ethical ;'

'(2) that the human reconstruction necessary for a socialist society cannot be effected by the State, but can be achieved by a mass movement with a moral basis such as Bhoodan ;'

'(3) that what is needed is not a movement for the capture of power, but a movement which requires its participants to begin here and how to live the new way of life,' according to the ideals and values of socialism.

A. Rai Chaudhury

Social Change. *By H. Ian Hogbin, Published by C. A. Watts & Co. Ltd, 1958. Price 21s. net.*

The author depicts in this book a painstaking analysis of the factors of social change. Broad factors, according to him, are general dissatisfaction with the restrictions inherent in the existing social order as is evidenced in the collapse of the Hawaiian religious system in the nineteenth century; alterations in the density of populotion, either upwards or downwards; modification of the natural environment, as by soil erosion or volcanic eruption; the migration of the group to a new country; and invasion by foreigners having superior tools.

In analysing the dynamics of social change, the author first considers the different theories of social change and social continuity. He has departed from the path of evolutionist method of the nineteenth and early twentieth centuries and has taken to modern methods of approach. His own approach is through the analysis of social values, the sets of perferences current in any given society. His conclusions are not based on materials supplied by travellers' and traders' tales or missionary accounts as were of the most evolutionists, but from direct personal knowledge of the primitive peoples among whom he lived and spent many years. He is of opinion that change begins when the opportunity presents itself for achieving an established value is a new way. He discusses elaborately in this treatise the subject of spontaneous change and indicates how each innovation causes a chain reaction and points out that if many new things are introduced simultaneously, the different chain reactions can hardly be separated. Here he has suggested a method of examinlng a changing society which is to isolate the institutions. This procedure will facilitate discovery of what modfications have already taken place or are likely to occur in future,

He has devoted three complete chapters particuarly on Melanesia people and their changing institutions.

This book is a good account of the changes occurring throughout the world in the social life of the primitive and colonial peoples by the impact of civilization. A. Rai Chaudhury

Nuer Religion. *By E. E. Evans-Pritchard. Pp. xii+335 including Index. Oxford. At the Clarendon Press, 1956, Price 42s. net.*

The author of this book, a well celebrated British Anthropologist wrote two books earlier on the Nuer—an important cattle herding tribe dwelling in the swamps and savannah of the southern Anglo-Egyptian Sundar, *The Nuer* in 1940 and *Kinship and Marriage among the Nuer* in 1951. The present volume is the third series of books on Nuer and completes his study of the Nuer which begain in 1930.

Materials available on Nuer religion are 'meagre and superficial', the only detailed treatment being in Father J. P. Crazzolara's *'Zur Gesellschaft und Religion der Nueer* (1953). But the author holds that his account presented in this book differs with the earlier account specially so far emphasis and interpretation are concerned. Giving one of the reasons for such little account on Nuer religion, Professor Evans-Pritchard remarks that '..... they have nothing which can be properly called dogma, liturgy, and sacraments (*in sensu stricto*), and they lack a developed religious cult and mythology'.

The book contains a variety of chapters which were first written to be delivered as University lectures at Oxford and some for other occasions, viz., Chapters I (God) and XI (The Meaning of Sacrifice) were delivered at the Royal Anthropological Institute, as Presidential Address (1951), and the Henry Myres Lecture (1954) respectively. Chapter IV (Spirit and the Social Order) was delivered as the Monro lecture in the University of Edinburgh (1952), Chapter V (The problem of Symbols) as a lecture to the University of London Anthropology Club (1954), and Chapter X (The Sacrificial role of cattle) as an address delivered at the Fourth International Congress for Anthropology and Ethnology in Vienna (1952).

Commenting upon Nuer religion, the author says that it can not be either identified with the general Negro religion or even be called a typical Nilotic religion. It can be said to have strongly marked affinities with only Dinka religion.

The chapter opens with a preliminary discussion on the Nuer's concept of God, the idea which the people have about their relationship with him and the expression used in prayers. The equivalent word for God among the Nuer is *Kwoth* which means Spirit. God is thought as being high in the sky and everything connected with the sky has association with him. Like wind and rain he is invisible. But the Nuers do not regard any celestial phenomena itself as God but that is simply a revealation of God through them.

The word *Kwoth* has its plural form *Kuth* meaning a number of such spirits. They have been broadly classified into two categories, i.e.. the spirit of the above and the spirit of the below. Spirits of the above can be further divided as the spirits of the air or of breeze, and the *Colwic* spirits—which are generally persons changed into spirits as a result of lightening struck to them. These spirits are considered to be most powerful and nearest to God. The author further explains how a certain spirit of the air is significant for certain person or family and how it can be acquired.

Spirits of the below or the earth are thought to have fallen from above which is the abode of spirit. They have been further classed into a number of categories, viz., tolemic spirits, tolemistic spirits, nature spirits and fetishes, and have been duly illustrated. Dealing with the 'Spirit and Social Order' the author observes that the conception of *Kwoth* has got a structural dimension.

Chapter V deals with the problem of Symbols and the material forms in which spirit manifests itself. Chapter VI is devoted to the study of 'Soul and Ghost' in which the author discusses the Nuer's idea about man and presents a detailed account of ceremonies connected with death. He also tries to explain the ways in which the Nuer conceive of the disintegration of the person at death, and regard those who have been departed. Interesting concepts of *Cien* and *biit* have also been discussed which tell us about the significance of curse among the Nuer and the ghostly vengenence from the grave respectively. Chapter VII deals with the Nuer's idea of sin.

In Chapter VIII, the author goes into the detail of sacrifice and tells us about the variety of occasions of a sacrifice, its purpose, and the persons by whom the sacrifice is made. The author has distributed a sacrifice into four stages, i.e., presentation, conse-

cration, invocation and immolation. Spear has an important role to play in sacrificial rites and the author devotes a separate chapter on 'Spear Symbolism' where he brings out its significance and relates its association with paternal kin and lineage.

The author also tells us about the sacrificial role of cattle and maintains that 'cattle are necessary to Nuer not only for food and marriage but also for salvation, for the sanctification of their social undertaking and for overcoming evil in its twofold character of sickness and sin' (page 270). He puts forth the Nuer's idea of equivalence between men and cattle and shows how one is substituted for the other in sacrifice. The cattle are 'the means by which men can enter into communication with God ··· ' (page 271). The significance of sacrifice and the role of priests and prophets have also been touched in a separate chapter.

While concluding, the author makes some reflections on Nuer religion and examining the evolutionary, psychological, and sociological theories of primitive religions points out its weaknesses. He discusses the basic features of the Nuer religion and points out the difficulties faced in the study of a highly complex religion like Nuer. He sums up that 'Spirit is an intuitive apprehension, ...known directly only to the imagination and not to the senses. Nuer religious conceptions are properly speaking not concepts but imaginative constructions' (page 321).

Students of African ethnography will find this book valuable for the wealth of new materials on the religion of one of the most important African tribes. This comprehensive treatment of Nuer religion will also enable the students to give a deeper understanding of some other aspects of the Nuer life, and the book will remain a land-mark in its own field of study. About one and half dozens of illustrative plates, with several text figures further add the charm of this book.

K. N. Sahay